APR 14 1923

The American Economic Review

Vol. XIII, No. 1 SUPPLEMENT March, 1923

Papers and Proceedings

of the

Thirty-fifth Annual Meeting

of the

American Economic Association

CHICAGO, ILLINOIS
DECEMBER, 1922

Edited by the Secretary of the Association

Publication Offices: St. Albans, Vt., and New Haven, Conn.
Subscriptions: American Economic Association, New Haven, Conn.

Entered at the Post Office, at St. Albans, Vt., as second-class matter

Price, in paper, $1.25

AMERICAN ECONOMIC ASSOCIATION

Organized at Saratoga, September 9, 1885

Past Presidents

JOHN B. CLARK, Columbia University
ARTHUR T. HADLEY, Yale University
RICHARD T. ELY, University of Wisconsin
EDWIN R. A. SELIGMAN, Columbia University
FRANK W. TAUSSIG, Harvard University
JEREMIAH W. JENKS, New York University
DAVIS R. DEWEY, Massachusetts Inst. of Technology
EDMUND J. JAMES, University of Illinois
HENRY W. FARNAM, Yale University
FRANK A. FETTER, Princeton University
DAVID KINLEY, University of Illinois
JOHN H. GRAY, Carleton College
WALTER F. WILLCOX, Cornell University
THOMAS N. CARVER, Harvard University
JOHN R. COMMONS, University of Wisconsin
IRVING FISHER, Yale University
HENRY B. GARDNER, Brown University
HERBERT J. DAVENPORT, Cornell University
JACOB H. HOLLANDER, Johns Hopkins University
HENRY R. SEAGER, Columbia University

OFFICERS FOR THE YEAR 1928

President

CARL C. PLEHN, University of California

Vice-Presidents

FRED R. FAIRCHILD, Yale University
BERNARD M. BARUCH, New York City

Secretary and Treasurer

RAY B. WESTERFIELD, Yale University, New Haven, Conn.

Elected Members of the Executive Committee

HARRY A. MILLIS, University of Chicago
ERNEST M. PATTERSON, University of Pennsylvania
MATTHEW B. HAMMOND, Ohio State University
HENRY C. TAYLOR, Washington, D. C.
RICHARD T. ELY, University of Wisconsin
THOMAS W. PAGE, Washington, D. C.

Managing Editor of the American Economic Review

DAVIS R. DEWEY, Massachusetts Institute of Technology, Cambridge, Mass.

Editorial Board

O. M. W. SPRAGUE, Harvard University
DAVID A. MCCABE, Princeton University
BENJAMIN H. HIBBARD, University of Wisconsin
GUSTAV A. KLEENE, Trinity College (Hartford, Conn.)
WALTER W. STEWART, Amherst College
JAMES E. LEROSSIGNOL, University of Nebraska

Program Committee

The President, *ex officio*
HORACE SECRIST, Northwestern University
ERNEST L. BOGART, University of Illinois
LEWIS H. HANEY, New York University

Inquiries and other communications regarding membership, meetings, and the general affairs of the Association, as well as orders for publications, should be addressed to the Secretary of the American Economic Association, Yale Station, New Haven, Conn.

TABLE OF CONTENTS

PAGE

Program of Annual Meeting 1

The Trend of Prices, by Allyn A. Young 5

The Probable Trend of Rate of Interest and Investment, by H. Parker Willis ... 15

The Outlook for Wages and Employment, by Alvin H. Hansen 27

Discussion:
- Wesley C. Mitchell 45
- Mary Van Kleeck 47

Some Social Aspects of Overhead Costs, by John Maurice Clark 50

Commercial Rent as an Expense and Its Relation to Profits, by Horace Secrist. 60

Local Factors in Connection with Labor Turnover, by Anna Bezanson 90

Discussion:
- Frank H. Knight 105
- Rexford G. Tugwell 107

Wage Theories and Wage Policies, by John R. Commons 110

The Standard-of-Living Factor in Wages, by William Fielding Ogburn 118

The Productivity Factor in Wage Determinations, by George Soule 129

Discussion:
- Paul H. Douglas 141
- Sam A. Lewisohn 141

The Course of Agricultural Income during the Last Twenty-five Years, by David Friday 147

Accumulation of Wealth by Farmers, by L. C. Gray 159

Discussion:
- O. E. Baker 179
- John D. Black 181

Do Principles of Large-Scale Production Apply to Merchandising? by L. D. H. Weld 185

The Proper Sphere of Governmental Regulation in Connection with the Marketing of Farm Products, by E. G. Nourse 198

Discussion:
- James R. Howard 209
- Charles J. Brand 213
- W. D. Moriarty 217
- F. E. Clark 219

Round Table Conference on Aims and Methods of Bureaus of Business Research

Aims and Methods of the Bureau of Business Research, Northwestern University, by Horace Secrist 2

The New York University Bureau of Business Research and Its Work, by Lewis H. Haney 2

The Bureau of Business Research of the University of Illinois, by A. C. Littleton 2

The Harvard Bureau of Business Research, by Mary E. Osgood 2

Summary of Round Table Conference on Aims and Methods of College Courses in Transportation, by W. E. Butterbaugh 2

Minutes of Business Meetings 2

Report of the Secretary 2

Report of the Treasurer 2

Report of the Auditing Committee 2

Report of the Editor of the American Economic Review 2

Report of the Special Finance Committee 2

Report of the Membership Committee 2

Memorial to Former President Simon N. Patten 2

PROGRAM OF THE THIRTY-FIFTH ANNUAL MEETING

WEDNESDAY, December 27

2:30 P. M. FIRST SESSION (Joint Meeting with the American Statistical Association)

General Topic: THE OUTLOOK FOR 1923

Paper: THE TREND OF PRICES
Allyn A. Young, Harvard University

Paper: THE PROBABLE TREND OF RATE OF INTEREST AND INVESTMENT
H. Parker Willis, Columbia University

Paper: THE OUTLOOK FOR WAGES AND EMPLOYMENT
Alvin H. Hansen, University of Minnesota

Discussion:

Wesley C. Mitchell, Columbia University
Walter W. Stewart, Federal Reserve Board[1]
Mary Van Kleeck, Russell Sage Foundation

5:00 P. M. MEETING OF THE EXECUTIVE COMMITTEE

8:00 P. M. SECOND SESSION (Joint Meeting with the American Statistical Association and the American Sociological Society)

PRESIDENTS' ADDRESSES

Presiding Officer: Walter Dill Scott, Northwestern University

1. THE ADVENTURE OF POPULATION GROWTH[2]
   W. S. Rossiter, American Statistical Association
2. COMPANY *v.* TRADE UNIONS[3]
   Henry R. Seager, American Economic Association
3. THE MORAL DUALISM OF MACHIAVELLI[4]
   J. P. Lichtenberger, American Sociological Society

10:00 P. M. SMOKER, in the Elizabethan Room of the Congress Hotel, tendered by Northwestern University and the University of Chicago

THURSDAY, December 28

9:00 A. M. BUSINESS MEETING (See report on page 239)

10:30 A. M. THIRD SESSION

General Topic: ECONOMIC THEORY AND PRACTICE

Paper: SOME SOCIAL ASPECTS OF OVERHEAD COSTS
J. Maurice Clark, University of Chicago

Paper: COMMERCIAL RENT AS AN EXPENSE AND ITS RELATION TO PROFITS
Horace Secrist, Northwestern University

Paper: LOCAL FACTORS IN CONNECTION WITH LABOR TURNOVER
Anna Bezanson, University of Pennsylvania

Discussion:

F. H. Knight, University of Iowa
Rexford G. Tugwell, Columbia University

---

[1] Did not supply manuscript.
[2] Printed in the *Publications of the American Statistical Association.*
[3] Printed in the AMERICAN ECONOMIC REVIEW, March, 1923.
[4] Printed in the *Proceedings of the American Sociological Society.*

12:30 P. M. Subscription Buffet Luncheon at the Congress Hotel

2:30 P. M. Fourth Session (Joint Meeting with the American Association for Labor Legislation)

General Topic: Factors That Should be Considered in Making Wage Determinations

Paper: Wage Theories and Wage Policies
John R. Commons, University of Wisconsin

Paper: The Standard-of-Living Factor in Wages
William F. Ogburn, Columbia University

Paper: The Productivity Factor in Wage Determinations
George Soule, Director of Labor Bureau, Inc., New York City

Discussion:
Paul H. Douglas, University of Chicago
Sam A. Lewisohn, New York City

FRIDAY, December 29

10:00 A. M. Fifth Session

Presiding Officer: Benjamin H. Hibbard, Wisconsin College of Agriculture

General Topic: Farm Income in the United States

Paper: The Course of Agricultural Income during the Last Twenty-five Years
David Friday, Michigan Agricultural College

Paper: Accumulation of Wealth by Farmers
L. C. Gray, Department of Agriculture, Washington, D. C.

Discussion:
O. E. Baker
Claude Benner, Iowa State College[5]
John D. Black, University of Minnesota

2:00 P. M. Round Table Conferences

1. Aims and Methods of Bureaus of Business Research
Chairman, Horace Secrist, Northwestern University
The Bureau of Business Research, Northwestern University
Horace Secrist
New York University Bureau of Business Research and Its Work
Lewis H. Haney
The Bureau of Business Research, University of Illinois
A. E. Littleton
Harvard University Bureau of Business Research
Mary E. Osgood

2. Aims and Methods of College Courses in Transportation
Chairman, W. E. Butterbaugh, Syracuse University

4:30 P. M. Memorial Meeting to Former President Simon N. Patten

Addresses by:
Richard T. Ely, University of Wisconsin
J. P. Lichtenberger, University of Pennsylvania
Rexford G. Tugwell, Columbia University
C. H. Crennan, Chicago
Francis Tyson, University of Pittsburgh

---

[5]Did not supply manuscript.

8:00 P. M. SIXTH SESSION

General Topic: FOREIGN FINANCIAL PROBLEMS[6]

Paper: A CONSTRUCTIVE FINANCIAL METHOD V. DOLLAR DIPLOMACY
Henry Bruère, New York City

Paper: EUROPE'S FINANCIAL DISORGANIZATION AND POSSIBLE REMEDIES
Benjamin M. Anderson, Jr., New York City

Paper: THE EUROPEAN ECONOMIC SITUATION
Harold G. Moulton, Institute of Economics

Discussion:

Albert Thomas, International Labor Office, Geneva
Walter Lichtenstein, Chicago
Irving Fisher, Yale University

SATURDAY, December 30

9:00 A. M. BUSINESS MEETING (See report on page 240.)

10:00 A. M. SEVENTH SESSION

General Topic: PROBLEMS OF MARKETING

Paper: THE FARMER'S INFLUENCE OVER PRICES[7]
Benjamin H. Hibbard, Wisconsin College of Agriculture

Paper: DO PRINCIPLES OF LARGE SCALE PRODUCTION APPLY TO MERCHANDISING?
L. D. H. Weld, Chicago

Paper: THE PROPER SPHERE OF GOVERNMENTAL REGULATION IN CONNECTION WITH THE MARKETING OF FARM PRODUCTS
E. G. Nourse, Iowa State College

Discussion:

James R. Howard, American Farm Bureau Federation
H. E. Erdmann, University of California[8]
Charles J. Brand, U. S. Department of Agriculture
William D. Moriarty, University of Washington
Fred E. Clark, Northwestern University

---

[6]The Papers of this session are published in the AMERICAN ECONOMIC REVIEW, March, 1923.

[7]Published in the *Proceedings of the American Farm Economic Association.*

[8]Did not supply manuscript.

TIGH
BOU

THE TREND OF PRICES

By Allyn A. Young
Harvard University

HTLY

UND

degree of probability characterizes the inferences drawn from the empirical laws of the business cycle.

There are some few dissenters who emphasize the undoubted fact that it was no ordinary business cycle that came to an end in 1920; and who argue that in proportion as inflation and the rise of prices were on a magnificent scale, so the period of deflation and of falling prices will be prolonged. A few even hold that prices must return to the pre-war level before they again increase noticeably.

This matter of a possible return to pre-war prices deserves some passing attention. So far as the immediate future is concerned, such a return is not only undesirable but impossible. The rapid rise of prices was attended with economic injustice, unevenly distributed.

THE TREND OF PRICES

By Allyn A. Young
Harvard University

It would be unprofitable for me to attempt to make this paper a summary of the statistics that bear upon the problem of the course of prices in the immediate future. Such statistics are now marshalled, organized, and interpreted by groups of investigators engaged in forecasting general economic conditions. I could at best turn over only a few spadefuls in the field they cultivate diligently. I shall do better, I have concluded, to limit myself to a review of some of the more important elements of the problems.

There is difference of opinion. Business men outside of a few favored industries seem to feel that on the whole the year 1922 has been disappointing. They are looking forward to 1923 with uncertainty, not unmixed with pessimism. On the other hand, I infer that students of the business cycle see nothing abnormal and no large measure of uncertainty in the present situation. Following upon the collapse of 1920, liquidation and recovery seem to have taken their normal course. During the last few months there have been some small but apparently trustworthy signs of the beginnings of another period of credit expansion, and there appear to be no immediate obstacles large enough to check it.

With respect to this issue I think we must accept as probably trustworthy the forecasts founded upon the analysis of the business cycle. Exact quantitative studies of the phenomena of the business cycle are, I think we shall agree, the most important contributions American scholars have made in recent years to the science of economics. Most of our working knowledge of the future is reducible to expectations that events will follow one upon another in sequences such as we have already experienced. Not certainty, of course, but a distinctly high degree of probability characterizes the inferences drawn from the empirical laws of the business cycle.

There are some few dissenters who emphasize the undoubted fact that it was no ordinary business cycle that came to an end in 1920; and who argue that in proportion as inflation and the rise of prices were on a magnificent scale, so the period of deflation and of falling prices will be prolonged. A few even hold that prices must return to the pre-war level before they again increase noticeably.

This matter of a possible return to pre-war prices deserves some passing attention. So far as the immediate future is concerned, such a return is not only undesirable but impossible. The rapid rise of prices was attended with economic injustice, unevenly distributed.

But drastic deflation would bring with it a new series of burdens and injustices, only in small part compensating for the old ones. It would be a new instance of two wrongs failing to make a right. Deflation of that drastic sort, moreover, is beyond the powers of those who direct the policies of the federal reserve system,—and I do not mean that I think there is any reason to suppose that it is what they desire or intend.

Half, or more than half, of the present volume of deposits in the banks of the country has been created by purchases of government and corporation securities, or by loans in which such securities figure as collateral. That much at least of the present volume of purchasing power is inelastic, so far as *contraction* is concerned. It may be increased, but it cannot be decreased except by the slow processes of taxation and of the accumulation of real savings in advance of the year-to-year requirements of industry. Complete deflation is impossible, therefore, so long as these hardy fruits of inflation yet live.

The general level of prices, declining from its post-war peak, has reached a broad plateau, of which the eye can as yet see no ending. There will be cyclical and other oscillations, but these do not determine the long-time trend. If we turn to past experience for light on the distant course of that trend, we find it of little help. The rise of prices during the Civil War was hardly more than a billow on the surface of the general current of world prices. It was quickly flattened out and drawn into the general downward course of that current. The world-wide rise of prices in the Napoleonic period affords a better parallel. From the peak they reached in 1814 prices declined, at first rapidly and then more slowly, interrupted only by short periods of expansion, like that of the thirties, until, in the middle of the century, the flood of new gold turned them upward again.

Should we infer that in this particular history is likely to repeat itself? Not unless we have no reason to suppose that there are no essential differences in the other characteristics of the post-war periods we are comparing. I believe that there are differences so important that we cannot afford to overlook them.

The thirty years following the Napoleonic period, like the thirty years following the Civil War were marked not only by a diminished production of the precious metals, but also by the development of means of communication and transport, by the settlement of new and rich territories, by an increase in the rate of exploitation of the world's stores of mechanical energy, and by a rapid expansion of the world's population. What appears like deflation was in no small part an expansion of the physical volume of trade.

Can one look forward today and say with any reasoned conviction that a notable further increase in the rate of acceleration of the world's

economic progress is probable?—such an increase as would of itself accomplish a substantial part of the work of deflation? Is not the outlook with respect to the increase of foods, raw materials, and sources of mechanical energy rather such as to lead us to contemplate the day when diminishing returns will cease to appear apologetically in our textbooks as a mere tendency, once of some local importance in the England of Ricardo, but since submerged by larger forces? No one could hold that the physical product is not to continue to increase, but is it not likely that its increase will be at a diminishing rate? And is not this probability—or possibility if you will—enough in itself to suggest that we should be slow to assume a parallel between the next thirty years and the periods that followed the Napoleonic and Civil wars?

The future of the gold supply, of course, ought to enter into our calculations. The uncertain factors, however, so greatly outweigh the discoverable ones, that the best that could be offered would be mere conjecture. Furthermore, except for times of extraordinary changes in output, like those at the middle and the end of the last century, the gold supply has more the nature of a dependent than of an independent variable. There may be a new California or a new Rand. Failing that—and the world's mineral resources have been so thoroughly mapped that we know the chances are against it—it seems improbable that the world's annual gold output will return to its pre-war level so long as prices remain as high as they now are.

The pre-war production of gold was supporting an increasing price level. The present annual output of $350,000,000 would support a stationary price level, but hardly one so high as we have now. The diminished output of gold, therefore, is likely to exert a downward pull on prices. Offsetting in some measure this downward pull, there will undoubtedly be increased economies in the monetary uses of gold. A given amount of gold will support a larger measure of purchasing power than it did before the war. A quantitative estimate of these opposed tendencies must be a matter of impressions rather than of exact analysis. My own impression—and it is no more than that—is that, even with a declining rate of increase of physical production, something like equilibrium between the output of goods and the output of gold will ultimately be reached only at a distinctly lower price level than is in immediate prospect.

All this has very little to do with prices in the year 1923, except so far as it eliminates some questions and thus narrows the field of discussion. Our immediate interest is with a short period of time—the field of the business cycle. But the business cycle is a fluctuation within or around a long-time trend. We have made some progress in

our analysis if we may conclude that there is little reason to expect that during the next few years the *trend* will be downward.

Two unusual factors in the present situation, I suppose, are in the minds of those who distrust present forecasts based on the sequence of events in past business cycles. These factors are, first, the unprecedented size of our gold reserves, coupled with the facilities the federal reserve system affords for the pyramiding of credit, and, second, Europe's uncertainties.

These great stores of gold are rightly a ground of uneasiness. Yet I do not share the fears of those who believe that the revival of business will feed upon those reserves until they are all but completely absorbed in a prodigious rise of prices. This negative conclusion does not depend upon the probability that long before expansion had gone far the federal reserve banks would be in duty bound to do all that they could to restrain it. If such action on their part should come, I do not doubt that it would be effective. But drastic action, I believe, is not likely to be needed.

I do not mean that a plentiful supply of available credit does not lead to business expansion. Some few economists hold that an expansion of credit is an effect, not a cause, of an expansion of business and of an increase in the volume of goods produced. I believe that view to be misleading (rather than untenable) first, because surplus reserves are a necessary *condition* of business expansion, and, secondly, because there are certain relations of a quasi-mechanical sort between low interest rates and business revival.

The most important relation of this sort is found early in the period of revival, before liquidation of the debts left over from the preceding business cycle has been completed. Low interest rates increase the prices of bonds and create conditions favorable for long-time borrowing. Whether short-time borrowing is more profitable at one time than another depends on the differential between profits and interest. Of the two the rate of profits, merely because it is subject to a wider range of variation, may be said to be the more important determining factor. We place the emphasis rather better, perhaps, when we say that a high rate of profits creates a demand for (short-time) credit than when we say that a low rate of interest in the short-time money market attracts borrowers.

But business projects looking farther ahead, and calling for the placing of investment securities, are not determined wholly or even primarily by the current level of profits, especially at a time when the recovery of business from its last collapse is not yet complete. Low interest rates and high bond prices, rather than profits and the volume of business immediately in prospect, are then, in a real sense, the determining factors.

According to the compilations of the *Commercial and Financial Chronicle*, over a billion dollars' worth of corporation securities were issued in the second quarter of 1922—equalling the amount issued in the last *half* of 1921. Bond prices reached their peak in September, about a month after interest rates had turned upward. Bond issues have since declined, and relatively to stocks, which reflect profits rather than interest rates, they are likely to decline further.

The revival of the building and construction industries is thus connected, in a quasi-mechanical way, with the condition of the money market. And of course there are some marginal business operations which will be undertaken when interest rates are low that distinctly higher rates might prohibit. But, for the most part, once business revival is under way, it may well be that the money market plays a passive role, until such time as declining profits encounter a rising rate of interest, and expansion comes to an end.

The forces at work within a period of business expansion, it is the general opinion of competent students, are partly of a mechanical and partly of a psychological order. Expansion is a bull movement in business, reproducing on a larger scale many of the features of a bull movement on the stock exchange. Its dominant feature is the optimistic discounting of income from future sales. For a while optimistic expectations justify themselves. Money paid out in the expenses of production comes back in the form of consumers' demand for goods. And in a period of rising prices, consumers, it is to be observed, go into the bull side of the market on their own account. Larger sales to them at higher prices demand and seem to justify larger advance of bank credit. Again sales increase as consumers' incomes increase, and so the process of expansion continues in a cumulative way until something brings it to an end.

Now our present interest, so far as the year 1923 is concerned, is in *what brings a period of expansion to an end.* If there are no limits except those set by bank reserves we may well view the prospect with dismay, and ask ourselves just how far prices would rise before our present reserve ratio of approximately twice the normal legal limit would be cut in half.

Such an outcome would be consistent with the views of those who interpret the business cycle wholly in terms of the money market. Prosperity comes to an end, they hold, because, and merely because, bank reserves reach their end. The growth of deposits diminishes the reserve ratio; money is drained from reserves into hand-to-hand circulation as wages and retail prices increase; finally the higher level of prices leads to an unfavorable balance of trade, foreign exchange rates rise, gold is exported, and the banks are forced to contract credit and thus precipitate a crisis.

Such, in rough outline, is what we may call the banking theory of crises. It is not to be doubted that it describes with substantial accuracy *some* aspects of *some* business cycles. But it is not a satisfactory general account. We have had some crises, notably that of 1893, in which gold exports played an important part. We have had others, like that of 1907, with which gold exports had little or nothing to do. It is clear, furthermore, that transitions from favorable to unfavorable balances of trade can not explain *world-wide* depressions of business.

If this banking theory of business cycles were wholly adequate, the surest and simplest way of doing away with crises would be to abolish the gold standard. With irredeemable paper currency there should be, if this view is right, no end to expansion and to prosperity. Europe's present monetary situation would be one to be envied. But the fact is, as we know, that no increase of the currency, no increase of credit, will push business and industry up with it beyond a certain point. Resistance or drag grows at an increasing rate. No amount of inflation can do more than delay the inevitable collapse.

We may conclude, therefore, that it is not necessary that a period of business expansion, once under way, should continue until the surplus lending power of the banks of the country has been wholly absorbed. Other obstacles might and probably would first retard and then stop it before it had reached that point.

Professor Mitchell and other careful students who have approached the facts of the business cycle without preconceived theses, have found it necessary to attach fundamental importance to the way in which the costs of doing business increase in a period of rising prices. While profits, or expected profits, are increasing, business men compete with one another for labor and raw materials. The supply of each is elastic only within limits, so they have to pay more for them. There is common testimony, furthermore, that as labor becomes more fully employed it becomes, on the average, less efficient. And as the capacity of the railways and industrial plants of the country becomes overtaxed they too become *relatively* less efficient. That is, they are operated at increased expense per unit of output. Interest rates also increase, but this is a factor of a different type, and on the whole of less importance. Interest rates seem again, as in an earlier stage of the business cycle, to have more importance for the long-time than for the short-time money market. High rates make producers reluctant to build new plants, even when the capacity of their old plants has been reached.

Such are some of the principal ways in which costs increase during a period of prosperity. Important as these factors are, however, they do not *by themselves* suffice to bring about a collapse. For the ex-

penses of production, viewed from another angle, are money incomes, and must in turn be expended for consumers' or producers' goods. Demand for goods in general *must* grow as fast or nearly as fast as business outlays grow. Why, then, should expansion stop, unless the supply of credit gives out?

The explanation must be found, not in a difference between aggregate demand and aggregate supply, but in maladjustments of demand and supply. As prices increase the *distribution* as well as the amount of money incomes changes, and hence the *incidence* of the demand for different types of consumption and production on goods changes. Without a careful statistical study of the problem it would be hazardous to generalize respecting the precise way in which rising prices shift demand. Fuller employment tends to make labor's relative share larger, while the lag of wages behind prices tends to reduce it. How much farmers can buy depends in part upon the crops and in part upon world demand. It is clear, however, that in a period of rising prices the demand for luxuries must increase faster than the demand for necessaries. It is also clear that prosperous industries not only attract larger investments, but, just because they are prosperous, have larger funds at their own command. Business surpluses grow faster than the general fund of disposable savings.

These few examples must suffice. Overproduction and underconsumption theories miss the point. A period of rising prices is attended with both overproduction *and* underproduction, with underconsumption *and* overconsumption. The expansion of production does not and can not shift its direction fast enough to keep pace with the changing distribution of demand. In fact it advances under its own momentum in such a way as to increase its unfitness to meet the shifting of buyers' demands. In this way strains accumulate in the industrial system which of themselves would bring about its collapse, whether in the course of an ordinary business cycle or in a period of paper money inflation.

With surplus bank reserves as small as they were in the United States before the war, and as likely to be absorbed early in the period of recovery by an increase of investment purchases by the banks and by loans on stock-exchange collateral, the supply of credit was undoubtedly an important limiting factor. But the experience of other countries, and notably of France, shows that it is possible for central banks to maintain large surplus reserves without making use of drastic changes of discount rates. It is important to note, however, that these large reserves could hardly have been preserved if the banks holding them had yielded to the pressure of inflationists and had *reduced* rates in order to delay or ward off a period of business depression. Doubtless under American conditions variations of reserves

are bound to be much larger than they were in France; but nevertheless I think it improbable that in an average business cycle the expansion of production and the rise of prices would go far enough to exhaust reserves as large as we now hold, unless inflationists should get control of federal reserve banks.

There seems to be a general agreement among those who have compared the happenings of the last year with the sequences of events in earlier business cycles that the slow advance of wholesale prices which has continued, with some slight interruptions, during the past year will persist during part but probably not all of the coming year. There is difference of opinion with respect to just when the upward movement will end. I attach much weight to Professor Persons' carefully considered opinion that prices are likely to continue to rise well into the second half of 1923, possibly through most of the year.

So far as I know no one has ventured to predict the probable extent of the rise. During the past year the increase of wholesale prices, on the average, has been from 12 to 15 per cent. Along with this increase there has been a notable gain in manufacturing output, although we are not yet back to a normal level and are far short of the post-war peak, which, according to Professor Day's index, was reached in March, 1920. The chances are that in 1923 the expansion of credit will have a relatively *decreased effect on output*—even though production is likely to be considerably increased—and a relatively *larger effect on prices.*

It is difficult to allow for the influence of probable changes in the prices of agricultural products. Despite recent recoveries, the prices of farm products remain low as compared with the general price level. It is possible, although not at all certain, that they will move rather sharply upward. But in any event it is not probable that during the coming year they will fully regain their relative position as compared with the prices of manufactured goods.

In earlier business cycles prices have usually increased more rapidly in the later than in the earlier stages of the period of expansion. This fact and the other considerations we have just reviewed afford an inadequate basis for a forecast. But so far as they go they suggest that the rise of prices in 1923 will be somewhat greater than it has been in 1922.

Some may say that there are elements in the present business situation which will retard or even prevent a further rise of prices. The banks carried business houses through the collapse of 1920 in a way that was impossible before the federal reserve system was created. There have not been the drastic reductions of capitalization that followed some of the earlier crises. Exact comparisons with earlier periods are impossible, but the lists of the corporation bonds put on the

market during the present year give the impression that an unusual proportion of them have been issued to fund floating debt or to provide working capital. Business houses, it might be inferred, are not on the whole in so sound a condition as in corresponding stages of earlier cycles.

Even if this is true—and I suspect the contrast with earlier periods may be overdrawn—I can not see that it has much bearing upon the immediate course of prices. And at any rate there are compensating factors. Thanks in part to the effects of federal taxation upon business policies, the net amount by which business establishments are overcapitalized is probably now unsually small.

The cost of living in 1923 seems hardly to offer a separate problem. The effect of a probable upward trend in food prices may possibly be offset in part by a decline in the cost of fuel and light. Building costs have increased substantially in recent months and are more likely to increase further than to decline, but there is no indication as yet that there will be marked increases of rents. In general, there seems to be no reason to expect any departure from the well-nigh universal rule that the cost of living follows the movement of wholesale prices, although with a distinct lag and with less violent fluctuations.

The European situation is a highly uncertain variable. If Europe should merely continue on the way of slow but real improvement under the surface of political and financial turmoil, the course of prices in this country would hardly be affected; for our present price structure may be said to be adjusted to the present European situation.

The collapse of the paper currency of Germany or of any other important country of western Europe, accompanied by a writing down of its internal debts, would, after the immediate reaction had passed, *increase* Europe's ability to borrow from us. The placing of any large European loans in this country would lead to increased exports and would make prices in this country correspondingly higher and our reserve ratios correspondingly lower. This possibility, however, appears to be contingent upon the willingness of the reparation claimants to waive the first liens they now hold on Germany's power to pay.

Thus far I have assumed a purely passive attitude on the part of the federal reserve banks. I believe that slight advances in rediscount rates, largely by reason of their psychological effect, would retard the expansion of business and diminish the rise of prices. More drastic steps would be less likely to hold things where they are now than to force a reaction in prices. If prices are permitted to take their normal upward course, and reaction comes later, the federal reserve banks, if they still hold surplus reserves, are likely to be pressed to use inflationary measures to postpone the inevitable.

The year 1923 is fairly sure to put the economic and political

strength of the federal reserve system to a severe test. Maladjustments in the price structure and the uneven progress of different industries make it hazardous as well as unwise for the federal reserve banks to act now. On the other hand, a purely passive policy will in the long run only accentuate the difficulty of their problems. Somewhere between the two extremes of premature action and of action too long delayed they may find, it is to be hoped, a right middle course.

THE PROBABLE TREND OF RATE OF INTEREST AND INVESTMENT

By H. Parker Willis
Columbia University

In beginning what I have to say, a personal explanation may not be out of place. For some years past, I have felt that the definite forecasting of coming economic events had no scientific basis and hence was unwarranted as a phase of economic study. The passage of time has confirmed me in this belief, and it seems only fair that I should preface my remarks today with the statement that they are to be taken rather as a diagnosis of existing conditions and tendencies than as an effort to predict, or any pretense at individual ability to foresee, the course of affairs during the coming year, or to do more than express an opinion as to tendencies. This I am sure is the attitude of all scientific students.

I believe that it is the function of economic science to make careful analyses or diagnoses of existing conditions and to compare them carefully with situations of an analogous character that have developed in the past. Such diagnoses or analyses, when checked by such historical survey, may be useful as a guide to individual judgment. Every individual must form his own opinions of prevailing tendencies and must shape his conduct for the future largely upon the teachings which he has gathered from past experience. It is well, therefore, that he be as carefully and completely informed as possible, and time is not lost in pointing out as minutely as circumstances permit important phases of existing economic relationships. What is essential above all things is to remember, first, that economic changes do not come even approximately at the dates that are selected or indicated as the probable times of change, and, second, that it is always possible for very great alterations of condition to set in without warning, due to unexpected or unexplained human and other factors whose influence may have been ignored or at times exaggerated, and which permit of no exact forecast whatever.

Remembering these qualifications, let me now turn first to a review of some outstanding events of the year just closing, and thereby establish a basis for some generalizations regarding the present. The year 1922 has been a period of disappointment. Some forecasters had looked for an early revival of business, which, however, has come only with the present autumn, although it had been preceded by financial and stock market revival beginning some six months earlier. In the field of prices, resumption of the upward movement had set in at about the beginning of the year, and had continued until a little past

midsummer, only to be followed by recession and later by the present period of comparative stability. In banking we began the year with federal reserve and member bank portfolios greatly reduced, and for the first six months of the year the enlargement was comparatively slow in any and decrease continued in some. During the second six months, however, relative increase or growth has been very substantial, especially at the federal reserve banks. But, in spite of these conditions, interest rates have advanced only slowly, and after standing for a good many months at low figures, have even now attained only a moderate level. There is apparent abundance of available current funds, and an enormous technical lending power in the federal reserve banks, due to the great accumulation of gold there as a result of unduly long continuance of the gold hoarding policy, and the liquidation of foreign obligations in specie rather than in goods. From the securities standpoint, the year has been peculiar. It began with values on a relatively unsatisfactory level, and then for about five months passed through a period of "boom" during which average quotations were greatly advanced. This has now been followed by a recession in which about one-third of the entire gain during the upward movement was canceled, although later recoveries have partially made up for this shrinkage, to the extent of one-third or one-half according to the special group of issues under study.

Meanwhile, trade has at length entered upon a period of growth with steel plants running as high as 80 per cent of capacity, while carloadings are at a maximum and business activity in many directions is fully up to what may be called normal level. Wholesale and retail trade are shown by appropriate indexes to be far ahead of last year, while conditions in nearly every productive and distributive line indicate enlargement in colume of activity. Our export trade, it is true, is off about 20 per cent from that of a year ago, and is not likely to recover. On the other hand, it still remains an open question whether domestic production in certain lines can expand very much farther without developing an outlet abroad. In some lines hesitation or slight recession is already obvious.

This, in general, affords a hasty survey of the main underlying facts of the past year's experience. Let us now inquire as to the financial and investment developments of the year. Outstanding among these is the great net increase in current quotations for both stocks and bonds to which reference has just been made, and the fact that simultaneously with this increase there occurred no corresponding increase in the short-term charge for bank accommodation. The first question to be asked is whether the higher levels attained by stocks and bonds during the year were abnormally high; and whether, if they were not, those levels may be expected to be restored

and perhaps surpassed. And, as a first step in answering that question, we may inquire why values moved steadily upward to these levels, notwithstanding that some observers had long been inclined to predict that no such recovery was probable in the near future. One reason for the advance is to be found in the fact that very great volumes of buying power had been set free as a result of the shrinkage in prices during 1920-21 and the recession in business. Houses which found that they had settled with their banks and with their other creditors, and still had on hand a large balance of fluid funds, sought to convert this into income-yielding capital assets, and accordingly bought bonds or preferred stocks. This demand naturally tended to increase the price of the securities in question, and was aided by an increasing speculation, furthered by an unduly low rate for money, which had been helped by the action of federal reserve banks in cutting discount rates too early and too far, partly perhaps because of pressure from a public desirous of restoring business activity.

The stock market would not thus have advanced, had it not foreseen some recovery in business, but the early advent of such recovery had been fairly evident for several months before the opening of 1922, due to the fact that stocks of merchandise were becoming exhausted, while the resumption of better conditions of employment after the so-called "unemployment crisis" in the late summer and autumn of 1921 was tending to stimulate demand. Advance in values of stocks and bonds was apparently somewhat "overdone," and high levels that were finally attained could have been made permanent or improved upon only as a result of more extended gains in business, accompanied by more thorough readjustment of prices and values among industrial groups. Thus, at the close of the summer of 1922, the question to be asked was simply this: Have prices and business conditions been sufficiently carefully readjusted to one another to permit activity of business to be resumed and to continue?

The answer to this question was partly afforded by the action of Congress in adopting a tariff bill which must necessarily have a very serious reflex effect upon our foreign trade. It was partly afforded by the action of groups of producers who insisted upon maintaining prices through trade agreements and refusing a readjustment to something nearer pre-war conditions. It was partly afforded by the refusal of bodies of organized labor to accept any adjustment with the employer which would imply considerable reduction from the high level of war wages. These restrictions upon competition necessarily retarded the movement back toward older conditions, and made it evident that the business improvement which had set in must be partial and incomplete.

At the same time, several internal factors in the situation were at

work. It was evident, as business activity grew, that business men, instead of borrowing more heavily from banks, were getting the funds they needed by "dumping" their holdings of securities on the market, thus at once "taking profits" and preventing further upward movement of values. Increasing business activity also drew off from the market funds which had been offered at short term by banks, with the result that stock market quotations naturally tended to shrink. The condition thus created, although technically assignable to such factors as changes in the banking situation, refusal to produce freely, and the like, was thus fundamentally the outgrowth of incomplete readjustment after the war. Prices had not fallen sufficiently, nor had they fallen anything like evenly enough, to provide a sound, stable basis upon which to build the new business structure. The result has been a halting and incomplete recovery, which probably could not have been perfect even if our tariff and fiscal policies had been more enlightened, and which when combined with unsatisfactory tariff and fiscal measures had the effect of preventing improvement from going far.

Combined with this domestic situation, was a state of things in foreign countries which, of course, was far from normal. One of the factors which during the first months of the year made strongly towards a higher level of home prices, and which tended to drain off available supplies of capital, was the fact that foreign countries had apparently once more gained access to this market and were disposed to make use of their advantages. During the first six months of the year, we were floating foreign loans at a rate which averaged a good deal more than $100,000,000 per month. This state of things, had it continued long, must have powerfully tended to raise rates for capital, and thus have restricted the supply available for domestic use, with corresponding advance in charges. It did not last long, however, but the loss of confidence which set in at about midsummer, due to the development of a fresh reparations crisis, prevented the further growth of our takings of foreign bonds. These bonds, so far as issued, have largely continued in an undigested condition, and it is not yet clear what the permanent attitude of the investor toward them is likely to be. Suspension of these advances, however, has the effect of releasing, or at all events of leaving free, a large amount of domestic funds which could now be used for home undertakings, but which otherwise would have gone to foreign countries. As business expanded, the increasing strain upon the banks was thus, in a measure, relieved by the lessening of foreign demands previously felt and previously involving a very severe reduction in available resources.

We may now turn to the present situation as interpreted in the

light of these conditions. On the whole, the volume of production at the present time is satisfactory. Railroads have practically all that they can do to transport freight, the steel industry running up to capacity so far as domestic production is concerned, for domestic capacity may be figured as about 80 per cent of full or theoretic capacity. Coal mines are being worked overtime, and their output is practically as large as physical conditions or mining will permit. The textile industry is well booked with orders, and in many other lines orders are plentiful. Our plant capacity is fairly well occupied for the present. All this has seemed to augur for some time to come at least a very favorable situation in which there should be a heavy demand for bank funds with corresponding enlargement of commercial loans and of deposits in banks. This should probably be reflected to some extent in higher rates of interest for capital, with rather greater difficulty in putting securities on the market except at remunerative rates of income. Higher rates, both short term and long term, ought to ensue, and there should be a reasonably extensive advance in prices. According to some statisticians, the continued price advance in commodities on the present movement ought to extend at least 6 or 7 points farther before the end of the present season and the advent of active spring trading in 1923. By making the cost of capital higher and at least somewhat further accentuating prices, business men might be expected to bring about a situation in which the actual cost of investment capital would be greater, rates accordingly higher, and business results correspondingly less satisfactory from the standpoint of economy.

Instead of this, there are now some evident signs of business recession. Apparently the railroads have about all that they can do, yet even at that they are not making much money except in a minority of instances. Moderate earnings will be shown by the more prosperous steel companies, but the year will result in unsatisfactory returns for a good many. The most urgent requirements in new building have been satisfied and not very much growth need be expected in that direction, barring fresh developments. Without multiplying details, it may be quite positively asserted that the edge appears to be taken off our prosperity.

Will this condition be altered? Strongly in the negative is the evidence afforded in a number of lines of effort. Our tariff policy is already exerting a stranglehold upon business of many kinds. Our immigration policy has prevented the bringing in of new labor ready to perform the necessary basic work at a moderate cost. Our taxation system has very greatly reduced the incentive to activity in business. Many other elements working in the same direction could be cited, but the influence of all may be summed up by saying that

they tend to prevent full expansion of productive activity. On the other hand, it is to be noted that, even without these restrictive factors, there was some ground for feeling that steady advance of prosperity was doubtful. The maladjustment of prices among industrial groups, the maintenance of values for manufactured goods at the same time that agricultural prices had, in various branches, been pushed back toward a pre-war level, all militated very strongly against continuation of the larger activity in business which has set in. We shall have to go much farther in readjustment, and we shall have to remove at least the most serious of our commercial restrictions if we expect to see complete recovery throughout our entire business system.

From another standpoint, it may be questioned whether we can attain full prosperity with a foreign policy of the kind that is now being pursued. Refusal to assist in restoring stability abroad, and refusal to furnish credit in needed quantities to foreign countries, necessarily tends to make the United States more than ever a non-competing group and limit the scope of its activities. This may avoid losses at many points but it also prevents the making of gains or the taking of advantages at many others. It is undoubtedly a serious factor in the present outlook and cannot help exerting a highly depressing influence upon the advance of domestic business.

Judging from the present prospects, therefore, one should look forward, during the early part of 1923, to a continuation of moderately good business as at present, but probably with a tendency to declining activity, and on the whole to declining profitableness. Recognizing this situation, the stock market may perhaps be expected to continue on a level similar to that which it now occupies pending the time that definite improvement in business is noted. With expansion thus checked, price expansion may also be expected to undergo a check, and to continue relatively slowly if at all. As for the values of securities, they, with nothing much better in sight from the general economic standpoint, can hardly be expected to go far above present levels. The effect of this slowing down of business should be to release capital, by taking the potential strain off from it in a measure, and to that extent may tend to sustain security prices by putting a certain amount of funds back into the invested form in proportion as the demand for such money in short-term commercial business is lessened. On the whole, however, a slight upward tendency in interest rates, sufficient to hold funds to the desired extent in active business may be anticipated. Summing up, we may naturally look, in these circumstances, for stable or somewhat lessened trade, stock and bond quotations of a fairly stable variety or with inclination to weakness, slightly higher interest rates,

and a continued process of readjustment in prices and business relations, pending the time that industry is restored to a profitable money-making basis in which the labor element renders an equivalent for the wages paid to it.

All of this analysis of prospective business conditions necessarily presupposes the use of the "covering words" so familiar in economic writing "other things being equal." But other things never are equal, and this is the essential difficulty in forecasting. At the present time two great facts or classes of conditions are to be taken into account as modifying the entire situation which exists at the close of 1922, and which, therefore, must be regarded as modifying the expected course of future events. These two great facts are our banking policy and our foreign policy. A fundamental change in either may profoundly affect the general course of our business developments, and hence of interest rates and investment values, to which I am chiefly addressing myself.

Let us see how this matter stands. The federal reserve system is now the holder of the residual commercial lending power of the country. If it determines to expand freely at low rates of interest and without restriction, the effect undoubtedly will be to release cash both for business and for stock market purposes. The concomitant which may be expected is an impetus to rising prices and along with such a price movement a development of what is popularly called inflation. For a year or more past some of our largest banks have fought against the inflationary tendency due to the present policies of the government and of the reserve system. They have not been particularly successful, as shown by the fact that prices have been advanced 20 or 30 points in the course of the year, according to index and method of estimate. Prices have been held back from a still greater rise by the fact that business conditions were not altogether favorable to rapid growth, for reasons already sketched as well as because bank credit had already been cut back very sharply during 1920-21. Now, what is the present position of the federal reserve system? At present the reserve banking system is not far from the position which it occupied about a year ago. At the close of the year 1921, after about eighteen months of liquidation, the system had reached what at that time was considered a very low point in its operations. The amount of bills on hand in the twelve banks, representing the commercial accommodations extended to the public, was about $1,350,000,000. Today the bills on hand are about $867,000,000, or, roughly speaking, $483,000,000 less than they were a year ago. At the same time, the gold on hand is about $3,045,792,000. That is an increase of close to $175,000,000, an accumulation which has resulted from net importations of gold during the

past year. The reserve percentage is not far from the same, being 72.8 as against 70.7. Outstanding notes are almost exactly the same, being in the neighborhood of $2,450,000,000. Member bank reserve accounts are about $137,000,000 higher than a year ago, being $1,840,000,000. Now this situation summed up simply amounts to a statement that the system is rather stronger in gold than it was a year ago, and that such increase in gold is somewhat more than paraleled by a corresponding increase in liability to members, while to the public the outstanding liability (notes) is practically the same as a year ago. In the meantime, the whole system has passed through a period of much greater reduction, reaching its low point about midsummer. Apparently that was the lowest point in the swing downward. Accommodation to the business public is now practically four-fifths higher than it was six months ago as shown by bills held. Or, stated in another way, the system has moved down into the trough of depression and then up out of it, and is now just about six months beyond low point, or nearing the same relative position as last year. This suggests that as things stand we should expect a still further movement of commercial accommodations upward, or, in other words, still further "expansion." How far is it still likely to extend?

The answer to such a question depends largely upon the condition of member banks. That condition can be best judged by the figures relating to the status of member banks in one hundred principal cities (about 800 in number), which represent about 40 per cent of the commercial bank assets of the nation. As compared with a year ago, reports of the nearly eight hundred banks show about $50,000,000 less in loans and discounts, but also show that loans, discounts, and investments are just about $1,000,000,000 larger than last year, being $15,789,000,000. Net demand deposits show a gain of about $800,000,000, being $11,111,839,000, while time deposits are $3,690,593,000, a gain of $711,000,000. The dependence of the member banks, as indicated by the amount which they have rediscounted with the federal reserve banks is still considerably less, the total of their borrowings from reserve banks being about $163,000,000 as against $400,000,000 a year ago. The amount of funds obtained from the reserve banks is somewhat less, there being at the present time about $360,000,000 less of accommodation extended to them. Summing up the situation, it amounts to this: Selected member banks (eight hundred representative institutions which report weekly and have about 40 per cent of the total commercial banking assets) are already indebted to the public in the form of demand and time deposits to the extent of about $1,500,000,000 more than last year at this time,

while their assets in the form of loans and discounts and investments have been increased in a smaller proportion, such increase however consisting largely of investments. This seems to mean a total demand deposit expansion for all banks of about $2,500,000,000.

In other words, there has been a very marked expansion in the course of a year, and this expansion (as in the case of the reserve banks) has come in large measure during the latter part of the year. The expansion, morever, has been made in such a way as to necessitate a resort to the reserve banks, the members continuing to hold a considerable amount of investments as compared with a year ago. Further expansion, then, in the way of accommodation to the public would apparently require still more dumping of investments on the market, or else resort to reserve banks for larger accommodations, which of course would mean a narrowing of the surplus lending power of these institutions. Which will be the step to be taken by the member banks?

Probably, as things stand, the tendency will be to call upon reserve banks for an increased amount of rediscounts. With reserve bank rates at the present low figure of 4 per cent in New York and Boston, the effect of the situation is to make it worth while for members to discount. Call rates, for example, have been quite stable around 5 per cent for some time past. There is, therefore, a very distinct profit to be made by borrowing at 4 and lending at 5 or 5½. On the other hand, ordinary business paper is now bringing considerably more than a while ago, few loans being made at less than 5 per cent and many at 6. The bulk of the investments being carried by the banks yield them at least 4½ per cent, and some considerably more than that. According to the latest statement, they have on hand nearly $1,500,000,000 in government bonds held by the eight hundred banks already referred to, and this may mean for the entire country $3,000,000,000 or more. Most of these holdings are the ordinary 4¼ Liberty bonds, which the banks will hardly "dump" as long as they can get accommodation through rediscounts at 4 to 4½ per cent. There are thus a good many factors making for inflation. In this connection, it is interesting to note that New York banks have been informed that they need no longer send in reports of their brokers' loans, thus relieving them from the surveillance of this sort which has existed for a good while past. The situation, especially if interest rates should rise a little further and funds become a little scarcer, would be such as to stimulate heavier borrowing at reserve banks. Undoubtedly, it is with a view to meeting some such situation that the Treasury Department is trying to facilitate the forcing of gold out of the vaults of the reserve banks—a policy which it cannot easily follow because the circulation largely consists

of federal reserve notes which are now outstanding in a considerably larger amount than a year ago. This policy has driven out of the banks something like $50,000,000 net, or a little less, a sum which, of course, is almost negligible when compared with the more than $3,000,000,000 held in the banks. The manifest reading of the situation seems to be that the ground has been prepared for an inflationary movement, which is feared by many, and is positively predicted by not a few.

The effect of a further development of the present position, with growth of loans, continued holding of large quantities of bonds, stocks, and other investments in banks, broadening of the discount accommodation obtained from reserve institutions, and continued expansion of deposit accounts and note issues, if it occurs, will undoubtedly be the same in the future as it has been in the past. These conditions may be expected to operate as a spur to higher commodity prices and higher quotations in the financial market, and to stimulate dealings on a basis of interest low as compared with the rate that would be dictated were it not for artificial aid to be derived from federal reserve banks. The outcome of such a policy may easily be, should other conditions call for it, to facilitate a new inflation period, with overbooming and "boosting" of values in somewhat the same way as was witnessed after the close of the war. Immediate remedies against such a danger would be either pressure on the part of the authorities at Washington to compel banks to "dump" their investment holdings so far as possible, instead of rediscounting, or drawing the lines more tightly with respect to eligibility, or advancing the rate of discount. European experience shows that the last remedy is of no use after inflation has become fairly started; it must be applied early in order to be effective. There is apparently little disposition to apply it at the present time, and this fact tends to confirm the inferences already stated with respect to inflation prospects.

The other fact of importance which must be taken into account is the present position in our foreign policy and foreign trade. Have we at the present time a foreign policy which would tend in any way to affect the business and so the investment situation? Our tariff and our isolation have so far had depressing effects, notwithstanding that they are adopted with the belief that they would advance business prosperity. Our Administration at Washington has in short, in this aspect of its activity, been tending to cut off business and damage prosperity. It has been living in a past in which domestic business was the controlling factor, and has neglected the circumstance that during the war we equipped ourselves as a large export nation and became a creditor. Ignoring the fact that the industrial

system of the United States has grown up, the Administration has persisted in wrapping it in swaddling clothes and preventing it from any active way of living. Suppose now, as the dispatches of the past few weeks have indicated, that there should be a reversal of this policy due to compulsion of circumstances; suppose further that this reversal should bring about a reintroduction of extensive foreign trade financing. What then?

There can be little doubt that such an operation on foreign trade will tend to stimulate our exports and to "help business." Irrespective of the question whether the funds were made available only for purchases in this country, the granting of new loans to Europe would certainly result in heavier buying here. European countries want much more of our goods than they have been able to get of late, and the reason that they have not bought more freely is simply that they could not get the funds with which to pay. The outcome has been to cut off their purchasing at a time when it was urgently needed by our producers. With a renewal of such purchasing power they would be likely to take our goods, thus leading to increased exportation, although probably resulting in another upward movement of prices here, just as was the case during the war, when the large Liberty bond issues were offered to the community, and their proceeds were used for purchasing goods for shipment abroad. This stimulus to foreign trade would result in increasing the activity of not a few plants which have lately found that the domestic demand was fully absorbed, so that they could not count upon getting many more orders, no matter what they might do. In some industries, as, for example, steel and iron, prospects are now such as to indicate a probable falling off, due to the fact that there is no likelihood of the intense domestic demand, such as that caused by large building operations, continuing at its present peak level. With this reduced demand it might be expected that a very considerable lessening in the iron and steel trade would ensue. This might be prevented if foreign business were to be increased through the effect of a German loan.

New loans of the kind now under consideration would have, according to expectation, some very important effects upon foreign exchange rates, by causing them to advance in the belief that the different continental countries would be able to reach a decidedly improved position. Rumor of the possible contemplation of a large loan early in December has already tended to move rates upward, and it may be expected that a definite undertaking of the sort would have a much more positive effect. There are some German authorities who within recent weeks have expressed the opinion that such loans might greatly influence the quotation of the mark, even without any definite alteration of conditions in Germany, because of the

light which would be thrown upon future prospects. For the same reason, they would undoubtedly help the franc in a somewhat similar degree, and other currencies would tend to benefit by it to the extent that it seemed likely that permanent financial effects would be produced through the carrying forward of the operation.

Such changes would tend to raise rates here, advance market activity, increase cost of new capital, and, of course, would tend to check increase in the capitalization value of old fixed-rate securities, though this influence might be offset by the growth of market activity and increase of prosperity.

As I have said in the beginning and as I now repeat, these views, hesitant and contingent as they are, are expressed with the utmost diffidence and with the renewed expression of opinion that economic forecasting has not yet reached any advanced stage of development but is still in an elementary and incomplete condition. Too many factors of unknown significance may intervene to prevent the definite development of the economic life of the country along the expected lines to make forecasts of any real worth. If it be answered that every individual must in some measure forecast the future, an affirmative reply may be rendered; but it should be noted that every such individual is engaged in forecasting the future all the time and that he changes his forecasts from moment to moment as circumstances impel him. The forecasts of economists, therefore, must in the present stage of knowledge be taken merely as very incidental aids to the individual forecasting which is always in progress. Particularly is such doubt present today when political systems and relationships are in a condition of flux and modification.

THE OUTLOOK FOR WAGES AND EMPLOYMENT

By Alvin H. Hansen
The University of Minnesota

Fluctuations of money wages are of little significance *per se*. They acquire meaning only as they are lined up against the movement of prices. From the standpoint of the wage-earner the important consideration is the relation between money wages and the cost of living. To the employer, on the other hand, the significant thing is the relation of the movement of money wages to the price movements of the products of labor. To put it in a more general way, the wage-earner is interested primarily in retail prices, the employer in wholesale prices.

The prospect of making profits is the force that motivates the entrepreneur. This prospect depends largely on the relation between costs and selling prices. Looking at industry as a whole and from the long-run point of view, the most important of all cost prices is the price of labor. Even for the immediate situation maladjustments between the price of labor and the wholesale prices of the products of labor are of great importance. Since such maladjustments greatly affect the profit margin, it follows that it is the entrepreneur's measurement of wage movements, and not the wage-earner's, that is of chief significance with respect to industrial prosperity and employment. We shall therefore consider wage movements in industry generally as well as in specific industries in their relation to wholesale prices. At the outset it may be well to call attention to the fact that while I am here emphasizing the relation between one special cost price, namely, wages, I do not overlook the importance of other price maladjustments.

The wage upheaval of recent years has by no means been uniform for all classes of labor. The wage index for skilled labor is very different from the wage index of common labor, and both differ materially from the movements of the average wages of factory labor. Again the wage changes of coal miners and railroad labor differ considerably from the fluctuations in other industries. It is therefore very difficult to say what the general level of wages was at the peak of the recent cycle or what the level is at the present time.

Union hourly wage rates lagged far behind the upward movement of wholesale prices in 1916, creating a huge margin of profit for employers of skilled labor. By 1917 wholesale prices had increased 81 per cent over the 1914 base, while union wages had risen only 12 per cent. From then on the margin gradually narrowed until by 1920

wholesale prices stood at the index number 231 and union wages at 195, still leaving a margin of profit for the employer of union labor. By 1921 this favorable margin was wiped out and a huge negative margin appeared. Wholesale prices dropped to 150 while union wages were still rising and reached the peak figure of 201. In May, 1922, wholesale prices stood at 151 and union wages at 189. This indicated some improvement, from the standpoint of the employer, in the wage and price situation as compared to the condition of 1921, but it is still very far from the pre-war relationship.[1]

The history of the wages of common labor presents a very different story. A combined index of the wages per hour of common labor used in the construction of public roads and the wages per hour of common labor in the steel industry shows the following comparison with wholesale prices. By 1917 the wage relative for common labor was 146 while the relative for wholesale prices was 181, leaving a profit margin less than half as great as for union labor. In 1918 this margin was very nearly wiped out, prices standing at 198 and wages at 189. In 1919 the relative for wholesale prices stood at 210, the wages of road labor at 206, while the index number for the wages of common steel labor had risen to 231. The combined wage index for common labor was 219 as against 210 for wholesale prices. The profit margin on common labor therefore disappeared as early as 1919. In 1920, prices stood at 231 and wages at 246. In 1921 prices had dropped to 150 and wages to 192. By February, 1922, the wages of common labor had been deflated to such an extent that the index number stood at 145, while wholesale prices stood at 144. The significant points to notice are, first, that the wages of common labor did not lag appreciably behind the movement of wholesale prices except for the year 1917 in the upward movement, and 1921 in the downward movement; second, that they rose higher than prices

[1]Union Wage Rates from Data Furnished by Bureau of Labor Statistics; Wholesale Prices from *Monthly Labor Review*.

Year	Union Rates per Hour (May of each year)	Wholesale Prices (Average for year)	Wholesale Prices (May of each year)
1914	100	100	100
1915	101	103	103
1916	105	130	126
1917	112	181	189
1918	130	198	196
1919	152	210	208
1920	195	231	255
1921	201	150	150
1922	189	151 (May)	153

in the peak and fell to the level of prices by the early part of 1922.[2] In passing it may be worth while to note that farm labor showed a similarly rapid adjustment to price changes.

The average wage curve for factory labor lies in between these two extremes of common labor and union labor. The most available data as well as the most representative industrially are for New York State. The data contained in the Industrial Bulletins cover 55 industries and include over a third of all the labor engaged in manufacturing. The wage movements of factory labor in New York State appear to be closely representative of factory wage movements throughout the whole country. The census of manufactures shows that per capita wages in the United States increased 99.8 per cent from 1914 to 1919, while the increase in New York State was 100.5 per cent—a difference of only seven-tenths of one per cent. Other comparisons confirm this conclusion. Fifteen of the 55 industries covered in the New York Industrial Bulletins are included in *Research Report No.* 52 of the National Industrial Conference Board. I have constructed index numbers of the average weekly earnings of these fifteen industries from each of these two sources. A comparison of the two sets of relatives shows that the movement of weekly earnings in these fifteen industries in New York State is almost exactly identical to the movement in the whole territory covered by the Board's Report. In the high wage period from June, 1920, to December, 1920, the index number derived from the Board's figures is 224, while the index number derived from the New York figures is 221. For the year 1921 the relative derived from the Board's data is 197,

[2]Sources: (a) Common Labor used in construction of Public Roads, *Monthly Labor Review*, June, 1922.

(b) Common Labor, U. S. Steel Corporation, *Survey of Current Business*, September, 1922.

(c) Farm Labor, *Monthly Crop Reporter*, September, 1921.

Year	Common Labor Public Roads (Wages per hour)	Common Labor U. S. Steel (Wages per hour)	Farm Labor (Wages per day, with board- Not harvest labor)
1914		100	100
1915	100	100	100
1916	113	120	112
1917	141	150	138
1918	180	197	184
1919	206	231	218
1920	241	251	255
1921	181	202	142
1922 (Feb.)	139	150	

and from the New York data 199. Month by month the two series correspond closely.[4]

The New York material is for average weekly earnings, not wage rates. The movements of wage rates, hourly earnings and weekly earnings differ considerably. If we assume that labor efficiency remains constant, hourly earnings constitute the best index of changes in the cost of labor. Extra pay for overtime, for instance, increases the cost of labor. Wage rates fail to register this item of increased labor cost, while hourly earnings do. Weekly earnings likewise register overtime bonuses, but they differ from hourly earnings in that they rise with fuller employment and fall with part-time employment. Even though there were no changes in wage rates or overtime bonuses, weekly earnings would rise with prosperity and fall with depression. This rise and fall would indicate no change in the cost of labor to the employer if we assume constant wage rates and constant labor efficiency throughout the cycle. But as a matter of fact, labor efficiency decreases in prosperity and increases in depression. Therefore labor costs would rise in prosperity and fall in depression even though there were no changes in wage rates. From the researches of the National Industrial Conference Board I have worked up index numbers showing the proportion of the full-time week actually worked in the various phases of the business cycle. These index numbers indicate that the proportion of the full-time week actually worked was about 3½ per cent higher in the peak of

[4]The fifteen industries are as follows: automobile, cotton, wool, silk, hosiery, knit goods, rubber, leather, boot and shoe, meat packing, chemical, paint and varnish, paper, printing and publishing, lumber and mill work, furniture.

Month	N. I. C. B. (July 1914 100)	New York State (June 1914-100)
June, 1920	232	226
July	231	226
August	229	223
September	229	218
October	224	221
November	216	218
December	210	216
January, 1921	198	206
February	199	204
March	201	204
April	199	198
May	197	201
June	199	202
July	195	200
August	196	197
September	195	197
October	196	196
November	199	192
December	193	195

prosperity and about 6½ per cent lower in the depth of the recent depression than had obtained in July, 1914.[1] The investigation of part-time employment in New York State in December, 1921, made by the chief statistician of the New York Department of Labor corroborates these figures. It is quite probable that these percentages do not exaggerate, at any rate to the extent to which labor efficiency decreased in prosperity and increased in depression. From this it would follow that weekly earnings are more representative of the movements of labor cost than hourly earnings.

The foregoing argument is based on the assumption that the full-time week is constant. It has in fact, however, been reduced considerably since the pre-war period. A reduction in the standard work week, other things remaining equal, will cause a fall in weekly earnings. If labor efficiency per hour remained constant such a decline in weekly earnings would not signify any reduction in labor cost to the employer. If, on the other hand, a reduction in hours resulted in a proportional increase in labor efficiency, any change in weekly earnings would then reflect a corresponding change in labor cost. It is perhaps to be doubted that labor efficiency per hour has actually increased in proportion to the reduction in hours in the last decade, though in many individual cases it has actually done so and more. At all events it is clear that weekly earnings constitute a conservative index of the movement of labor cost. Taking everything into consideration, it is

[1] Cf. National Industrial Conference Board, Research Report, No. 52.

Month	Index Nos. of Hrs. Actually Worked per Week	Index Nos. of Full-time Week	Percentage of Full-time Week Actually Worked	Index Nos. of Percentage of Full-time Week ActuallyWorked
July, 1914	100.0	100.0	92.6	100.0
June, 1920	95.1	92.0	95.7	103.3
July	95.1	92.0	95.7	103.3
August	94.7	91.8	95.5	103.1
September	93.7	91.7	94.7	102.3
October	93.7	91.7	94.7	102.3
November	91.2	91.8	91.9	99.2
December	89.0	91.7	89.9	97.1
January, 1921	86.1	91.7	86.9	93.8
February	85.9	92.2	86.2	93.1
March	85.9	92.0	86.4	93.3
April	85.5	92.6	85.5	92.3
May	86.3	91.8	87.0	94.0
June	86.5	92.0	87.0	94.0
July	85.9	90.6	87.8	94.8
August	86.9	90.7	88.6	95.7
September	87.5	90.7	89.2	96.3
October	89.4	91.1	90.8	98.1
November	88.8	90.4	91.0	98.3
December	90.6	90.4	92.8	100.2

not impossible that weekly earnings are actually superior for this purpose to hourly earnings or wage rates.

The average weekly earnings of New York factory labor lagged greatly behind wholesale prices in the upward movement. Taking 1914 as the base, prices had risen to 181 in 1917 while wages stood at only 129. Then the spread gradually narrowed. In September, 1920, wages stood at 226 and prices at 231. During the last quarter of 1920 the margin was entirely wiped out. From this period to the middle of 1921 the situation became increasingly worse from the standpoint of the employer. In June, 1921, wages stood at 202 while prices had dropped to 145. Then the situation gradually improved, prices having become stabilized and wages gradually falling. By February, 1922, wages had dropped to 190 while prices stood at 144. At this juncture the wage level became stabilized, but it stood 46 points above the price level.[5] Since April, factory wages have been rising until in September they were again over 100 per cent above the pre-war base.

The wages of bituminous coal miners lagged far behind factory wages until the year 1917, when increases were granted which put coal miners' wages temporarily ahead of factory wages. Factory wages however caught up again in 1918. Another increase was granted in 1919 but coal miners' wages failed to keep up with the rapidly rising level of factory wages. The further increases of April, 1920, again failed to bring miners' wages up to the new level reached by factory labor. With the depression that shortly ensued factory wages declined while miners' wages, except in the non-union fields, remained at the 1920 level. Thus the wages of bituminous coal miners are still 100 per cent higher than in the pre-war period.[6]

The wages of anthracite coal miners were advanced about 11 per cent in the 1916 agreement. From this period to November, 1918, anthracite miners suffered severely from a constant wage level while wages elsewhere were rapidly rising. In November, 1918, anthracite wages were lifted to over 100 per cent above the pre-war level,

Year	Relatives of Average Weekly Earnings New York State (June, 1914=100)	Relatives of Wholesale (1914=100)
1915	101	103
1916	114	130
1917	129	181
1918	160	198
1919	185	210
1920	222	231
1921	203	150
1922 (Feb.)	190	144

while factory wages had advanced only 70 per cent. By the end of 1919 factory wages caught up again, but with the new rates established by the Anthracite Coal Commission of 1920 anthracite wages again exceeded factory wages. This wage level, 140 per cent in excess of the pre-war level, still remains in spite of the general reversal in prices.[6]

Railroad wages lagged slightly behind factory wages until 1918. During 1918 they were somewhat in excess of factory wages. From 1919 to the middle of 1922 the curves for railroad and factory wages have run along on substantially similar levels.[7] Only in the last half of 1920 and the first half of 1921 did railroad wages exceed factory wages.

The middle of the year 1921 was the worst point in the period of depression. Prices had fallen heavily while wages had fallen but slightly. In June the factory wage index stood 57 points above the

[6]

Year	Index Numbers of Tonnage and Day Rates for Bit uminous Miners. (a) Source: *Monthly Labor Review*, June, 1920, p. 105	Index Numbers of Hourly Earnings for Anthracite Miners: Source: *Monthly Labor Review* Oct. 1920, p. 104	Index Numbers of Weekly Earnings for Anthracite Miners. Source: National Industrial Conference Board.
1914	100	100	100
1915	100	100	
1916	105	111	
1917	125 (April) 152 (November)	111	
1918	152	203 (November)	
1919	173	203	
1920	197 (April)	238 (April)	248 (October)

(a) It is likely that an earnings index would show a greater rise than the tonnage and day rate index. See review by writer on "Wages and Hours in Anthracite Mining" in *Jour. of Am. Stat. Ass'n*, Dec., 1922. The anthracite index given above is based on an estimate.

[7]

Month and Year	Index Numbers of hourly Earnings of R. R. Wage-Earners. Source: Interstate Com. Com. Nat'l. Ind'l. Conf. Bd.	Index Numbers of Weekly Earnings of R. R. Wage-Earners. Source: Interstate Com. Com. Nat'l. Ind'l. Conf. Bd.	Index Numbers of Weekly Earnings of Factory Labor in New York State. (June, 1914 = 100)
July, 1914	100	100	99
July, 1915	103	105	100
July, 1916	106	108	111
July, 1917	122	124	127
July, 1918	178	181	164
July, 1919	214	186	182
Feb., 1920	230	200	208
Aug., 1920	271	243	226
July, 1921	232	195	199
July, 1922		196	195

price index, or to put it another way, wages were 39 per cent higher than prices. From June on, prices became stabilized while wages continued to decline.[8] By February, 1922, seven months later, earnings became stabilized,[9] and prices began to rise. Earnings reached bottom earlier than wage rates due to short-time worked. At this juncture wages were still 32 per cent higher than prices. Picture to yourself the situation which would have obtained in pre-war days had wages generally been raised 32 per cent while prices remained stationary. Such an event would have been nothing short of revolutionary, yet that was precisely the situation in which employers found themselves when the post-war readjustment of wages terminated. It will be noted that I am here comparing the wage and price relationship in two successive periods of depression. The presumption is not that 1914 was a normal year, but merely that the wage and price relationship which then prevailed was normal with reference to the particular phase of the business cycle in which industry then found itself.

It may be objected that the general wage and price levels do not tell a story of the situation that exists in the different industries. I have therefore compared the wages in 17 industries, for which data were readily available, with the wholesale prices of representative products of these specific industries. For these 17 industries, wages

Months	Index Numbers of Weekly Earnings in New York State (June, 1914 = 100)	Index Numbers of Wholesale Prices (1914 = 100)	Percentage by Which Wages Exceed Prices
June, 1921	202	145	39
July	199	144	38
August	200	145	38
September	197	144	37
October	193	145	33
November	191	144	33
December	196	143	37
January, 1922	192	141	36
February	190	144	32
March	193	145	33
April	190	146	30
May	194	151	28
June	196	153	28
July	195	158	23
August	198	158	25
September	202	156	29

[8] Wage rates continued to decline until the middle of April after which rates began to rise. See *Monthly Labor Review*. From April 15 to May 15, 19 firms reported increases and 20 decreases, but the increases were nearly twice as large as the decreases. From May 15 to August 15, 171 increases were reported, and only 61 decreases.

were 26 per cent higher in February, 1922, than the wholesale prices of the products of these industries.[10]

I have also estimated the wages in three large industry groupings which are comparable with three of the most important of the price groupings of the Bureau of Labor Statistics. A comparison of the wages and prices of these three groups indicates that wages were 34 per cent higher than the wholesale price of the products of these in-

[10]Index Numbers of Wages and Prices, February, 1922.

Industry		Representative Product		
Name of Industry	Index Nos. Wkly Earnings. Sr: N. Y. Indus. Bull. June 1914=100)	Name of Products	Index Nos. Wholesale Prices Sr: Bur. of Labor Stat. (1914=100)	Percentage by Which Wages Exceeded Prices in Feb. 1922
Pig iron and rolling mill products	151	Pig Iron foundry No.2 northern	150	+1
Structural and architectural iron work	191	Structural steel	114	+67
Sheet metal work and Hardware	192	Steel sheets	160	+20
Glass	192	Glass, window Am Single AA	143	+34
Leather	194	Leather, calf chrome	166	+17
Boots and shoes	189	Boots and shoes men's vici calf	189	0
Paper	203	Paper newsprint	155	+31
Silk and silk goods	185	Silk: raw Japanese	178	+4
Wool manufactures	222	Woolen goods, women's dress storm serge	163	+36
Cotton goods	202	Cotton goods, print cloth	184	+10
Flour, feed, and other cereal products	181	Flour, 2nd patents, Minneapolis	154	+18
Meat and dairy products	183	Beef fresh carcass good native steers Chicago	106	+73
Bread and other bakery products	206	Bread, loaf, Chicago	157	+31
Cigars and other tobacco products	184	Tobacco, smoking	175	+5
Furniture, cabinet work	193	Furniture, bedroom set Chicago	223	—13
Saw mill and planing mill products	181	Lumber, spruce	113	+60
Drugs and chemicals	176	Drugs and chemicals	122	+44
			Average	+26

dustries."[11] It is probably safe to say that when factory wages became stabilized they were somewhere in the neighborhood of 30 per cent higher than the wholesale prices of the products of corresponding industries. Even as late as July to September, wages stood 26 per cent above the price level.

It is therefore apparent that wages were not deflated to the same extent as were prices. Now it may be argued that this is only a temporary situation. During 1921, for example, high labor costs were offset in part by the relatively low prices of raw materials. All prices are out of line. Why single out the price of labor? We are in reality confronted by a whole network of price maladjustments. There is, however, a fundamental difference between wages and other prices. A wage maladjustment is not easily rectified. Long after other prices have been brought into line, the abnormally high wage level is likely to remain. The question may properly be raised: How can a wage level remain, for any considerable period, out of line with other prices?

It may perhaps be contended that the new wage level is a permanent one because of the scarcity of labor resulting from the restricted immigration of the last eight years. The average net immigration of aliens from 1908 to 1914 inclusive was 611,389 annually. If we had maintained this rate of alien net immigration during the past eight years we should have had 3,321,000 more people in the United States by July 1, 1922, than we had, other things remaining equal. Something like two-thirds of our alien immigrants are wage-earners. If the former rate of immigration had continued we should now have some 2,200,000 more wage-earners than we actually have. Certainly the wage level is considerably higher than it would have been had those wage-earners actually been admitted. But that is a

[11]

Industry		Representative Products.		
Name of Industry	Index Nos. Wkly Earnings. Source: N. Y. Indus.'l. Bull. (June 1914 = 100)	Name of Product	Index Nos. Wholesale Prices. Source: Bur. of Labor Statistics (1914 = 100)	Percentage by which Wages Exceeded Prices on Feb. 1922
Metals, machinery and conveyances....	177	Metals, and metal products.....	129	+37
Textiles, boots and shoes, clothing, etc..	208	Cloths and clothing.....	178	+17
Flour, feed, etc., groceries, meat and dairy products, bread and bakery products.	197	Clothing, Foods..	132	+49
			Average	+34

very different thing from contending that the absence of these people explains how the present wage level can be so much above the pre-war level, price changes considered. The absence of any large immigration should certainly prevent real wages from falling as they had been falling for many years before the war, but it could scarcely explain any large rise in the wage level. Our population has as a matter of fact been steadily increasing during the last eight years; besides the natural increase, our total net immigration of aliens has been over a million and a quarter. With this increase in population it is not likely that the marginal productivity of labor is any higher now than in 1914. In short, it appears that the existing wage level is an abnormal one.

Such a wage level can scarcely fail to affect the volume of employment. To be sure, if we are to have during the next year or so another period of price inflation, the price level may temporarily catch up with the wage level, as in fact it is now in process of doing, but that will be only a temporary situation. With the next fall in prices, industry will again be confronted with an abnormally high wage level. The inevitable result of such a situation is that a considerable volume of unemployment ensues. From 1916 to 1920 wages were much lower than the industrial situation warranted, and all employers were eager to employ more labor. During 1921-22 wages were much higher than the industrial situation warranted, and an exceptionally large amount of labor went unsold. In so far as this is a problem of the business cycle, the remedy would lie along the line of employment insurance which would build up out of the large profit margin of the rising price period a reserve for wages to be drawn upon in the period of depression. But the problem that confronts us is broader than this. It has to do with the probability that for a considerable period to come the long-run or secular trend of prices will be downward owing to our inflated gold supply and Europe's inflated currencies. Every dip in the business cycle will bring a recurrence of the problem. It is a contest of high wages versus full employment.

Our two best sources of information on changes in employment are the New York Industrial Bulletins, and the *Monthly Labor Review* of the United States Bureau of Labor Statistics. The employment curves constructed from these two sources parallel each other closely, but the New York figures are more representative for they cover 55 industries, while the Bureau's figures cover only from 12 to 14 industries. During the year 1921 especially, the employment curve for New York State corresponds much more closely to the movement of the business cycle than does the curve constructed from the Bureau's figures.

From 1916 to 1918, the period in which the greatest margin of profit obtained between wages and selling prices, there was an unprecedented volume of employment. Employment reached a peak in 1917 and 1918. With a narrowing of the profit margin it declined. When the crash came and prices dropped, the margin was reversed and an equally unprecedented volume of unemployment presented itself. With the ratio between wages and prices slowly improving from the middle of 1921 on, employment gradually increased, particularly after the upward swing in prices beginning with February, 1922. Not until August, 1922, did the total volume of employment in New York manufacturing establishments equal the employment in June, 1914, eight years ago. The employment curve derived from the Bureau's figures corroborates this evidence. Not until May of the present year did it reach the June, 1914, level. In subsequent months the total volume of employment has exceeded that level.[12] But em-

[12]The following index numbers are constructed on the basis of the changes in total employment as reported. Each index series is therefore weighted according to the number of wage-earners reported each month in the different industries. It is not clear to the writer that there is anything to be gained from weighting the selected industries reported in the Review according to the number of wage-earners as given by the Census. This method has been applied by Mr. Ethelbert Stewart and has been followed by Mr. Berridge. To be sure, it would be an excellent method if the number of industries used was sufficient to be truly representative, but when 6 of the 13 industries reported are textiles, such a method is far from giving satisfactory results. The method used by the present writer gives greater weight to iron and steel, but it has been found that the metal industries "register very accurately fluctuations in other lines of industrial activity." (Cf. Berridge in the March 1922, issue of the *Statistical Journal*.) It will be noted that my index derived from the Bureau's figures follows the New York index much more closely than does Mr. Stewart's. The United States relatives have been reduced to the base of June, 1914. While the figures do not go back of January, 1915, it was assumed that up to that month the fluctuations correspond to the New York series.

Year	New York State (June, 1914 = 100)	United States (June, 1914 = 100)
1915	98	98
1916	114	113
1917	120	119
1918	122	119
1919	114	112
1920	118	115
1921	92	96
1922, Jan.	92	97
Feb.	95	99
Mar.	96	97
April	95	97
May	96	100
June	97	103
July	97	103
August	100	104
September	102	106
October	105	108

ployment in June, 1914, was at least 5 per cent below normal[13] and in the meantime there has been a considerable increase in population. The true increase in the manufacturing population can scarcely be secured from the 1920 census, because of the abnormal situation then obtaining. It is probably fair to assume that the relation existing between the rate of increase in the general population and the rate of increase in the number of wage-earners employed in manufacturing in the period from 1899 to 1914 was a normal one. If that assumption is sound, this ratio can then be employed to determine what would be a normal volume of employment in manufacturing at the present time. The rate of increase in population from 1900 to 1914 was 1.95 per cent, while the rate of increase in the number of wage-earners engaged in manufacturing was 2.71 per cent. The year 1914 was a turning point in the rate of increase in population.[14] From 1914 to 1921 the rate of increase in population was 1.22 per cent. Applying the proportion previously suggested, the normal rate of increase in the number of wage-earners employed in manufacturing since 1914 should be 1.695 per cent. On that basis the volume of employment should have been 14 per cent greater in 1922 than in 1914. Yet in fact the two indices combined showed that employment in June, 1922, was just equal to that obtaining in June, 1914, which was itself about 5 per cent below normal. It is clear that the volume of employment must increase from 15 to 20 per cent above the June, 1922, level before we can be said to have attained a normal condition of employment. As late as November it was only 9 per cent above that level. It is true that there has been considerable talk in certain quarters about a shortage of labor. No doubt there has been a genuine shortage in certain lines, but in the main, the alleged shortage arises out of the disorganized condition of our highly decentralized labor market. The statistics of employment, which of course are fragmentary, do not indicate any *general* labor scarcity.

Now how was it possible for the wage level to maintain itself in the face of this general unemployment? It is obvious that it is a great mistake to assume that all wage-earners have little reserve power. They do not have to sell their labor at any price and they refuse to do so. A higher money wage quickly becomes established as a standard in the minds of the wage-earners. The laborer and his family will endure endless sacrifices and suffering to retain that standard. An established wage is a front line trench which must not be given up at any cost. To yield may bring material comfort for the present, but it means a permanent loss for the future. The

[13] Cf. the writer's article on "The Buying Power of Labor during the War." *Jour. of Am. Stat. Ass'n.*, March, 1922.

[14] R. R. Belcher: "Estimates of the Population of the United States for Intercensal Years," *Jour. of Am. Stat. Ass'n*, December, 1921.

wage-earner is more concerned with the *price* of his commodity than with the total volume of his sales. He will rather suffer unemployment than accept a lower wage. The loss of employment he conceives of as temporary; the loss of his established wage he believes is a permanent loss. If one cannot retain a wage once achieved, what hope is there of recovering it? Our recent experiences on the railroads, in mining, and in the textile industry illustrate the point.

Skilled labor holds most tenaciously to a money wage once achieved. Skilled labor has more reserve power, its psychology is controlled more powerfully by established standards. Yet semi-skilled labor has shown unexpected tenacity. This tenacity has been reinforced by the absence of immigration. Immigrant labor readily accepts a lower wage for it is accustomed to a lower wage. Yet immigration chiefly affects unskilled labor, and we have already noted that the unskilled wage level was thoroughly deflated even without any large immigration. It was the semi-skilled and skilled wage level that failed to come down. There was no large immigration to help push it down and unemployment failed to do so.

The stage is thus set for an unprecedented struggle over the existing wage level. The unprecedented nature of this struggle will become clear from a comparison with the post Civil War days. The situation then was utterly unlike the present. During the war period wages rose but slightly compared to the rise in prices. Mitchell shows that by January, 1865, wages had increased only 52 per cent while prices had increased 148 per cent. Thus in spite of the heavy fall in prices from January, 1865, to July, 1868, the margin between wages and selling prices continued to be favorable to employers. Not until the year 1869 did the wage level definitely overtake the price level. This no doubt accounts in large part for the fact that here we have, so far as I know, the only outstanding exception to the direct correlation that regularly obtains between the movement of prices and the business cycle. It was not until after the panic of 1873, that the wage level had reached a point which proved an obstacle to prosperity. From 1873 to 1897 the struggle was on against a wage level too high for industry to sustain. It is to be noted that it was in this period that wage statisticians find the greatest gains in real wages. Money wages for the most part were holding their own and real wages were rising, but the buying power of labor as a class was low because of widespread unemployment, particularly in the seventies and nineties. In the very period when labor was making its greatest gains in real wages it was suffering the most in buying power. In fact it may be said that an index of real wages correlates inversely with an index of the buying power of labor as a class. This is due to the fact that when real wages are highest unemployment is greatest.

All labor cannot be employed when wages exceed the marginal productivity of the entire body of wage-earners. To be sure, wages cannot exceed the labor product, but it is obvious that the marginal productivity of 10,000,000 men would be higher than the marginal productivity of 12,000,000 in a similar situation. Thus unemployment makes possible higher wages for those employed, or, in other words, abnormally high wages cannot be paid without a considerable volume of unemployment.

Thus the long-run drop in prices resulted in a continuous struggle over the wage level, which became especially severe during the heavy decline in prices in the seventies and nineties. The struggle was, however, affected by two factors which no longer prevail—unlimited immigration on the one hand, and free land on the other. Both employer and employee had an avenue of escape. The situation facing us today is different. We have a closely restricting immigration law. There is no free land to which to escape from the wage system. This situation affects the organization of labor on the one hand and immigration legislation on the other. The struggle against the existing wage level will almost of necessity take two forms: (1) anti-union agitation, and (2) agitation for increased immigration.

It is not unlikely that public sentiment will take a more determined stand against unionism in the years ahead than ever before. It is fairly clear that the public was not in sympathy with either the miners or the shop-crafts in the recent strikes. A high wage level is not likely to win the support of the public for the closed shop, restrictive policies, or any tightening of the grip of unionism. Public sentiment is apt to show itself in a determined effort to narrow the range of trade-union weapons along the line of recent court decisions and to bring labor organizations themselves within the scope of public regulation as suggested in the Coronado case. The United States is not likely to follow, for the present at any rate, the lead of Great Britain in allowing both sides to fight it out on an open field.

The agitation for increased immigration has already acquired considerable momentum. To make headway in Congress it has to gain the support of the agricultural interests. In recent years the rural population has been opposed to immigration chiefly on political and social grounds. These considerations *taken by themselves alone* are not likely to prevail against the farmers' economic interests. And it should not be difficult to make the farmer believe that immigration will lower the high wage level which keeps freight rates up; that immigration will increase the demand for farm products and raise farm product prices; that immigration will lower the prices of manufactured products by lowering the price of city labor; and that finally it will give him cheaper help on the farm. The immigration

question bids fair to become one of the leading questions of the day. And it must be admitted that the wrong decision may possibly be made. The business and agricultural classes hold the balance of power and will for long years to come. The economic interests of these classes are *one* in respect to the immigration question. But on the other hand, with regard to the middlemen, railroad valuation, credit facilities, trusts, excess profits and taxation, the farmers and wage-earners can be lined up on a fairly common program. This alignment of interests may overshadow the other, and prevent any drastic modification of the principle of restricted immigration.

But suppose the immigration law is modified. The result of increased immigration will scarcely be to lower the wages of skilled labor. Rather it will lower still more the already deflated wages of common labor. Extensive immigration will merely serve to increase the exceptionally large spread that already obtains between the wages of skilled and common labor in America.

What then is to be done with the existing wage level of skilled and semi-skilled labor? The easiest way of escape is by price inflation. For that we appear to be due for the next year or so. This will give temporary respite to the struggle. But it will only be temporary. Each succeeding drop in prices will bring a recurrence of the struggle.

It is not unlikely that wage statistics for the next decade or so will register a substantial gain in real wages. The pressure of a high wage level against a secular drop in prices is a tremendous goad to managerial efficiency.The recent study of the Federated Engineering Societies indicates that there is still room for large improvement in management on the basis of what has already been achieved by the better firms. Squeezed between a declining secular trend in prices and an unyielding wage level, the employer is forced to buckle down to the job of making industry efficient enough to carry the load of high wages. So long as the secular trend of prices is downward we are therefore likely to see a rise in real wages. But the constant struggle against declining prices and a recalcitrant wage level can scarcely fail to result in chronic depression with brief intermittent periods of prosperity whenever a way of escape is offered through temporary price inflation. Thus we may witness a period similar to that of the seventies and nineties, when real wages were rising but the buying power of labor as a class was low because of widespread unemployment. Sooner or later we shall probably arrive at a period in which the secular trend of prices will once more be upward. Then the entrepreneur will find himself more comfortably situated. The wage level and the price level will reach a more normal adjustment. Prosperity may be expected to become steadier and more sustained as was the case from 1898 to 1920. Real wages may decline, but

the buying power of labor will increase due to more general employment.

This brings us to a consideration of the cost of living and its relation to wages. The average weekly earnings of factory labor kept up with the cost of living until the latter part of 1919, after which they gained on the cost of living. In 1921 *real* wages stood 12 per cent above the 1914 level and during the past year they rose gradually until in the last quarter of the year they were more than 20 per cent above the pre-war base. This is the highest point ever reached in our history, exceeding as it does the previous peaks of 1896 and 1907. The history of the real wages of railroad labor is substantially similar to that of factory labor. Bituminous coal miners' wages did not overtake the cost of living until 1921, but were nearly 20 per cent higher at the close of 1922. In the anthracite field real wages declined severely until November, 1918. In 1919-20 they averaged about 12 per cent above the pre-war level. During the years 1921-22 they rose, owing to the decline in the cost of living, and at the present time are about 45 per cent above the pre-war base. Skilled labor suffered a severe loss in real wages all through the period of prosperity. Not until the depression of 1921 did the hourly rates overtake the cost of living. Then real wages rose and by May, 1922, the index number stood 15 per cent above the pre-war base. The history of the real wages of common labor is quite the reverse. There was a phenomenal rise during the upward movement of the cycle, and an equally remarkable drop in the depression period. In 1919 the real wage index stood at 122, and in the past year at 88. Thus the cost of living lagged far behind the wages of common labor throughout the entire cycle.[35]

[35]Real Wages 1914-1922 (1914=100).

Year	Factory Labor New York State. (Weekly Earnings.)	Railroad Labor. Wkly Earnings for July of Each Yr. divided by Cost of Living for June of each Year	Bituminous Coal Miners. Tonnage and Day Rates	Anthracite Coal Miners. Hourly Earnings.	Skilled Labor (Union) Hourly Rates	Common Labor (Hourly Rates)
1915	99	103	98	98	99	98
1916	104	99	96	101	96	106
1917	100	97	96	86	87	112
1918	102	115 (June)	97	81	83	120
1919	103	106	96	113	85	122
1920	107	114 (Aug.)	92	111	94	119
1921	112	110	109	132	111	106
1922 (Je)	119	119	120	145	115	88
1922(Sept.)	123					105

The year 1914 is an unfortunate base for the purpose here intended, particularly in the case of weekly earnings which were unduly low in that year; but it is the only common base possible.

Taking all classes of labor into consideration real wages on the whole barely held their ground until the first part of 1920, after which they gradually rose. On the other hand, the buying power of the wage-earning class was considerably above the pre-war level from 1916 to 1920, after which it severely declined. In 1921, in spite of the high real wages of those employed, the per capita purchasing power was about 14 per cent below the pre-war normal owing to the unprecedented volume of unemployment. With the upward swing of employment, labor's purchasing power increased and was well above normal at the close of the year.[16]

What now of the immediate future? The past movements of prices, wages, and employment indicate the following probable trend for the coming year.

1. Wholesale prices may be expected to rise more rapidly than money wages. The price level may therefore temporarily overtake the high wage level and may possibly exceed it.

2. Since the cost of living will probably rise rather slowly for a time at least, real wages in general are not likely to decline until the fall of 1923. The wages of skilled labor will probably rise very slowly. On the other hand, the wages of common labor will probably rise faster than the cost of living, as they did in the previous cycle, especially in view of the present restricted immigration. Thus common labor will quite likely recover much of the ground lost in the past two years. In fact, in recent months, substantial gains have already been made.

3. Employment is rapidly approaching normal and will probably exceed that level before the year is passed.

4. The purchasing power of the wage-earning class will be well above the pre-war normal in the coming year. This necessarily follows from fuller employment and a high level of real wages.

[16]Per capita Buying Power of Factory Labor, New York State (June, 1914 = 100): June, 1914, the base here used, was about 7 per cent below normal. Of the writer's article referred to above.

1915—96
1916–116
1917–115
1918–118
1919–109
1920–116
1921– 93
June, 1922–102
Sept, 1922–110

THE OUTLOOK FOR 1923—DISCUSSION

WESLEY C. MITCHELL.—Concerning the three papers which have been read at this session I have little to say beyond expressing the feeling which all present share that they are most interesting analyses of certain features in the business situation and most interesting forecasts of what developments we may anticipate in the near future. My chief purpose is to discuss an antecedent problem, about which there seems to be some difference of opinion among the members of our two associations—the problem whether we are justified in attempting to do what all three speakers have just done, that is, make forecasts of future business conditions.

Clearly the present officers of both associations must believe that such attempts are justified, or they would scarcely have arrranged a joint session upon "The Outlook for 1923." On the other hand, those of us who were present at the session last year in Pittsburgh at which Professor Hollander delivered his delightful diatribe upon the business prophets may harbor doubts whether our then president would quite approve of what we are set to do today. And at this very session Professor Willis began his paper in a way which led us to expect an issue different from that at which he arrived. "For some years past," said he, "I have felt that the definite forecasting of coming economic events had no scientific basis and hence was unwarranted as a phase of economic study."

From the conclusion of Professor Willis's paper we know how to interpret this preliminary warning. On the basis of a clear analysis of certain significant features in the present business situation, he proceeds to a rather detailed forecast of the same general character that many another economist has made in the past. To quote: "..... we may naturally look, in these circumstances, for stable or somewhat lessened trade, stock and bond quotations of a fairly stable variety, slightly higher interest rates, and a continued process of readjustment in prices and business relations, pending the time that industry is restored to a profitable money-making basis in which the labor element renders an equivalent for the wages paid to it." So far as Professor Willis differs from other business prophets, he differs merely in telling his hearers at the start and at the end that all prophecy in economic matters is exceedingly uncertain, and that if anyone makes use of his own "hesitant and contingent" views that person must do so at his peril.

This caution we must all applaud. Every word of warning with which Professor Willis has hedged about his forecast seems to me justified, and no less justified with reference to the forecasts made by others than with reference to the forecasts made by Professor Willis himself. But for all that can we agree with Professor Willis "that the definite forecasting of coming economic events [has] no scientific basis and [is] unwarranted as a phase of economic study?"

If we do agree with this dictum it must be because we lay heavy stress upon the word "definite." From Professor Willis's example I think we may expect him to accept a re-wording of his statement in some such terms

as these: "The tentative forecasting of coming economic events has a scientific basis and is a valuable phase of economic study."

To me at least it seems that this positive way of putting Professor Willis's statement expresses the attitude of most economists who are investigating business cycles. We find a scientific basis for tentative forecasting of economic events in the fact that analysis of past experience reveals a more or less regular round of events in the activities of business. That is, a period of marked prosperity terminates in a crisis, the crisis merges into a period of depression, the depression finally gives way to a revival, and the revival develops by degrees into a new period of prosperity. This succession of events is not invariable, for there are instances in which a period of intense financial strain of the sort characteristic of crises has occurred in the midst of a depression instead of at the end of a boom, and there are instances in which a revival has not attained the dimensions of a boom, but has relapsed into renewed depression. Moreover, the length of the successive phases of the business cycle, and of the full cycle itself, varies widely from case to case. Once again each successive phase of each successive cycle has peculiarities which differ from all its recorded analogues. Finally, our knowledge of the exceedingly complex processes of the business cycle is elementary and uncertain. All this is true, and if I had time for a fuller statement that statement would sound stronger than this bare reference to the irregularities and uncertainties of the business cycle. Yet it is also true that in all countries which have attained a highly developed money economy periods of business expansion do not run on indefinitely but yield to periods of business depression; and these periods of depression similarly are succeeded by new periods of expansion. That is true not only of the nations of Western Europe and of North America, but it is also true of Japan, Australia, South Africa, and the more highly organized countries of South America.

This more or less regular round of events in the past justifies the working hypothesis that future economic developments will show similar oscillations. But the irregularities of such successive rounds show that we are dealing with a process which is far from simple and concerning which our present knowledge is most inadequate. To learn more about the processes involved is the inspiriting task on which many men are now working. While these investigators have made gratifying progress toward fuller comprehension in the past decade, none of them imagine that their task is nearing completion. As scientific workers our chief concern should be with the unsolved problems—with what we do not yet know but have a prospect of finding out.

In this task of trying to extend knowledge of the business cycle, attempts to forecast the business future, to forecast it as definitely as possible, constitute a most helpful procedure. To analyze present business conditions, to project the processes now in operation into the near future, and to state as clearly as may be what their net resultants seem likely to be, put our working hypotheses to a severe test and may enable us to correct mistakes or fill gaps in our present knowledge. As Professor Willis says, even the most carefully made forecasts are fallible, and, to avoid misleading those un-

initiated in economic investigation, they should be stated with careful reservations. But to the investigator who makes them they are a method of testing the adequacy of present knowledge, and a method that is often most fruitful when the forecasts go awry. The one caution most needful to the scientific worker himself is not that he should admit the uncertainty of his expectations, but that he should follow them up afterwards and be stern in rejecting all easy explanations of why his forecasts did not fit the facts more perfectly. Perhaps no more fruitful session could be arranged for our convention in 1924 than one in which Professor Young, Professor Willis, and Professor Hansen should review the events of 1923, and discuss the reasons why what they have forecast today did or did not happen.

These attempts to forecast and these efforts to profit by our past errors in forecasting are not only an important method of gaining new knowledge, but they are also an indispensable part of the effort to gain control over the business cycle so as to increase the gains and reduce the losses it brings upon us. As Professor Willis pointed out, every business man must try to anticipate future developments, and he is entitled to any technical help which the economist and statistician can give him. But quite apart from these individual efforts to make profits or avoid losses we are beginning a social effort to reduce the wastes of booms and the widespread unemployment of depression—just as we have reduced the financial confusion of crises by adopting the federal reserve system. For the business cycle is a cycle of human behavior, and it is not extravagant to hope that we can learn to behave more wisely in the future. That task of acquiring control over the business cycle in the public interest, however, rests fundamentally upon our ability to foresee changes in business conditions a little before they happen and take measures to meet them. Forecasts for this purpose must be made by economists and statisticians, and they must be made with reference to conditions affecting the whole community. To make the efforts at control even tolerably helpful we shall need more reliable forecasts than we can frame today. And the way to improve in forecasting is to make the most carefully reasoned forecasts we can at present and learn all that we can from every error we commit. If we do the work in a scientific manner we should be able to find out what data now lacking are really needed, to use the old and new data with more skill, and so to put our forecasts upon a firmer basis than they have today.

Mary Van Kleeck.—Professor Hansen's paper, which I have been particularly asked to discuss, suggests some extremely interesting problems for research. He has sketched a picture of the trend of wage rates gaining upon wholesale prices until, as he expresses it, the stage is set for an unprecedented struggle over the wage level. He suggests that we are witnessing a race between wages and employment. He sees as the result of the struggle the growth of anti-union sentiment and agitation for relief from the restrictions on immigration, together with the possibility of a new stimulus to better management.

Professor Hansen has drawn this conclusion as the result of comparing the movement of wages with the movement of wholesale prices. He is

discussing wages from the point of view of the employer, who is thinking of the price of labor as an element in the cost of production.

In order to illustrate what I mean by the problems suggested for research in this discussion, let me point out three assumptions underlying it, which seem to me to be based upon wholly inadequate facts. I shall not attempt at this moment to consider statistics of wages or the statistics of prices—the methods of collecting them or their adequacy—although this is a big subject in itself.

First, is it quite safe to use the available commodity prices and the available data on wage rates and earnings as a basis for determining the relation between the two, when the price index includes a list of commodities different from the products of the industries for which wage statistics are available? Professor Hansen recognizes this difficulty when he confines his analysis on one point to a list of ten products, for which both wages and wholesale prices are available. But even these two lists are not absolutely identical.

Secondly, by what warrant do we assume that the year 1914, or thereabouts, was a "normal period" and that an unevenness in the rise or fall of prices as compared with wages subsequent to 1914 therefore represents a maladjustment? Have the economists set up a standard of normality at any time in the past which would justify our interpretating trends today as a maladjustment between wages and prices?

The possible fallacy of taking one year as normal in its relationships is illustrated if a single industry such as bituminous coal mining be discussed. The complete story of bituminous coal mining is not told in an index reflecting wage increases in 1917, 1918, or 1919, in comparison with prices of wholly different commodities. In the bituminous coal industry we are forced back to fundamental problems of industrial management and we find that as part of the inefficient functioning of the industry basic facts are not available.

In like manner the wage problem of the railroads is not revealed by an index of wage increases compared with commodity prices, since again the struggle over the wage level arises, in part at least, out of fundamental problems of administration.

Is it not true that some of the present difficulty arises out of our inability to analyze clearly on the basis of available data how wages should be determined in any industry? During the war we saw an acceptance of the idea by wage-earners and by the general public that the cost of living should determine the minimum wage. At present we are in a state of confusion as to how far this applies as a guiding principle in a given industry and what relation it should bear to other factors in wage determination. Lack of the data upon which to base a clear analysis of the method of wage determination necessarily produces confusion and no adequate forecast is possible until this confusion is recognized.

This brings us to the third fundamental difficulty that we find in Professor Hansen's paper, namely, the assumption that the trend of earnings is an index of the cost of labor. We know from the experience of individual firms that low wages do not always mean low labor costs and that

high wages may not always mean high labor costs. It is a fallacy to assume that because earnings have increased at a more rapid rate than wholesale prices, therefore the labor cost has increased. We have not the facts upon which to base this assumption.

Should economists limit their view of the struggle ahead over wages to the possible influence of anti-union sentiment and agitation for increased immigration? Should they not include in the picture the possibility of action based upon more thorough research? I was interested in noticing that in this discussion of the outlook for 1923 no reference was made to the Federal Coal Commission which should make its report in 1923. Is this because we lack faith in federal commissions, or is it because we lack faith in research as a possible means of substituting reason for force? Is it not important that a group like this should be exceedingly critical of the basic data now at hand and alert to urge that it be extended and improved so as to make possible intelligent interpretation?

Doubts have been cast this afternoon upon the possibility of accurate forecasting. Is forecasting the future, however, any more difficult than interpreting the present or the immediate past? Do not both depend upon more accurate information than we now possess? Should we not include in a forecast for 1923 the possibility of improvement in basic statistics of wages and employment and especially increased research which will supply the information needed about individual establishments, separate industries, and finally the summation of these facts as a more adequate basis for forecast?

SOME SOCIAL ASPECTS OF OVERHEAD COSTS

An Application of Overhead Cost to Social Accounting, with Special Reference to the Business Cycle

By John Maurice Clark
The University of Chicago

Let me hasten to say that I am not solving the whole problem of social accounting, and I have no yardstick for all the ultimate social values. I have tried not to push my study farther than the tools I use will legitimately carry it. One of these tools is the simple device of canceling out payments from one industry to another and viewing costs as they would be if all industry were operated by one corporation. In other words, it is merely an extension of what the Interstate Commerce Commission does for the railroads when it reports their earnings, expenses, and capitalization "as one system." This is a very limited sort of social accounting. Other tools and other canceling devices will carry us farther.

Most important of these other tools is the notion of "differential costs," meaning the entire difference in costs resulting from a given difference in output. Wherever the sum of the differential costs is less than the whole cost of the business, there will be something left over, and for this the best name seems to be "residual cost." This is one aspect or variety of "overhead cost," and for most purposes the most significant and fundamental, but also the hardest to capture and measure. A rough approximation to it is furnished by dividing expenses into two parts, one of which is assumed to vary in proportion to business ("variable cost") and the other is assumed to be "constant." As ordinarily used, variable costs are a fairly good index of differential costs of short-run changes in business, moderate in amount and within the limits which existing plants can handle. However, a formula that would be accurate for this problem would necessarily be inaccurate for any other. In a broader sense wherever we find "residual costs" or "constant costs," this means that there is unused capacity somewhere, though it need not be in the physical plant, and is quite as likely to be in the labor that works it. The study of "overhead costs" may be regarded as primarily a study of unused capacity.

Differential cost has two very interesting characteristics. In the first place, since it is entirely a matter of comparing alternatives, the result depends as much on one alternative as on the other. You do not know what the differential cost of operating your plant is unless you know what the alternative is, in fact, it may be two or three things at once. The differential cost of increasing the output of a going plant will be one thing. The differential cost of shifting from one variety of

product to another will be a different thing, and the differential cost of keeping the plant in operation, rather than shutting down entirely, will be different from either of the other two. More broadly, if it is a question of people making automobiles or making sewing-machines, the earnings of one occupation consitute a differential cost of the other, and, so far as labor goes, this may be represented by the "going rate" of wages. But if it is a question of making automobiles or going idle, the differential labor cost of making automobiles is practically zero: going rates of wages have little or nothing to do with it. This characteristic of differential cost is the key of the argument that is to follow.

In the second place, "differential cost" means that we compare costs under two different sets of conditions, and *cancel out the common items.* But because these items cancel, it follows that *we do not even need to measure them,* if we can be sure that they really are common items. It is this fact which makes it possible for a would-be scientist to say a few things—a very few things—about the ultimate human costs of industry. No one can measure them, but this is not necessary in order to be able to say that under certain circumstances, they are constant. Granted this much, one can establish some very significant propositions in the field of social accounting.

So much for the tools which this argument is to use. The argument itself falls into seven theses, which may be condensed as follows:

I. While increased output in general may or may not bring economy, "off-peak" business nearly always does; its "differential cost" is extremely low, and an increase in this class of business brings substantially no increase in interest, depreciation, and many expenses of operation.

II. Efficiency requires putting any "idle overhead" (unused capacity) to work, whenever the product is worth its differential or variable cost.

III. The apparent volume of variable costs in industry is deceptive, on account of what may be called the "shifting and conversion of overhead costs." The cost of steel to the purchaser is a "variable charge" of so much per ton, but the cost of producing the same steel may be largely constant, regardless of output. This is a typical case. The process may be reversed, and variable costs may be converted into constant, though far less frequently. In either case the discrepancy between real and apparent costs may give rise to waste.

IV. The amount and behavior of overhead costs borne by any one business depends on the kind of contracts it makes in buying and selling, and therefore is "a matter of human institution," alterable by agreement and subject to control.

V. Most of the costs of industry are constant, with reference to the

business cycle. Where the alternative is idleness, the differential costs properly chargeable to additional output are next to nothing.

VI. There are some costs and damages which industry is not required to compensate at all, and a complete social accounting must include these as a form of "unabsorbed burden." The amount of this burden is to some extent subject to control by the community, which has it in its power to improve the allocation of its overhead costs.

VII. In the interests of collective efficiency, the costs of industry should be laid, either upon those responsible, or upon whatever persons and in whatever ways may best serve as incentives to economize those costs and utilize to the utmost the potential values resulting. This calls for important changes in the customary forms of financial obligations.

So much for the sketch of the argument; it remains to fill in this frame work, so far as time permits. The first thesis stresses the peculiar importance of fluctuations of output, and deals with "peak loads," "off-peak business," "load factors," and the like.[1] During short-time ups and downs, many costs are constant which are not constant for any other kind of business movement. For example, there is a very definite seasonal "peak" in railroad freight traffic, the maximum coming in October, and the minimum around January in most parts of the country. At any time except October the railroads ordinarily have spare capacity. Superimposed on this there is the "business cycle," and if a given October comes in a time of depression, there will be spare capacity even in October; in short, there is spare capacity a great part of the time. Any business coming at off-seasons, and only at off-seasons, will get the benefit of unused capacity and will show a very great economy. A careful comparison of the Interstate Commerce Commission's monthly figures of earnings and expenses for the railroads of the country yields the conclusion that, with reference to monthly fluctuations of traffic, about half the operating expenses (and, of course, substantially all the capital charges) are independent of traffic.[2] If the yearly trend is observed, however, it shows that operating expenses have been increasing faster than traffic during the last ten years. Allowing roughly for the shrinking dollar, it is still clear that the economy of increased traffic shown in the yearly trend is not nearly so great as that shown in the monthly fluctuations.

Thus the commonly accepted view as to the proportion of constant

[1] See G. P. Watkins: "A Third Factor in the Variation of Productivity," *Amer. Econ. Review*, V, 753. In this stimulating article Mr. Watkins discusses labor's load factor (pp. 770-77), furnishing many suggestions which are here followed out in treating labor as an overhead cost.

[2] The writer is hoping to publish the results of this study at an early date, but feels the need of supplementing the figures with physical data, independent of the shifting value of the dollar. This result corroborates Ripley's conclusions (*Railroads: Rates and Regulations*, chap. II) *so far as monthly fluctuations are concerned*

expenses appears to be corroborated for monthly fluctuations, but not for yearly movements. For yearly movements, the proportion of constant costs would be much smaller, while for daily ups and downs it would be much larger. One chief reason for the discrepancy is that yearly growth calls for increased capacity.

But, as we have seen, in any given month, a railroad commonly has some unused capacity. As a result, railroad men have formed a habit of thinking of added business as always a gain, and so it is, in the short run, if the railroad can handle it at all. But if we take on added business without being careful to see that it is confined to the off-season, then some day when business is prosperous and the October "peak" requires more equipment, tracks, and terminal facilities, the economy will not be so great; in fact, it may have disappeared entirely. If the railroad then keeps its plant up to the demands of the traffic, it will have just as much unused capacity as before, and the added traffic which it took on at extra low rates *on account of having unused capacity, will not have resulted in any better utilization of its plant than before.* On the other hand, seasonal rates on coal, in order to stimulate movement in the spring and early summer, might improve the capacity factor of the railroads enormously, and actually save them from the necessity of making some enlargements of their plant which they otherwise might have to make.[1]

So much for the first thesis. The second says: "Utilize the idle overhead." To this end, anything that is worth its "differential cost" is worth producing. Here, however, we run into a dilemma, since "overhead costs" must be covered somehow, otherwise competition would degenerate into cutthroat warfare, and would quickly disappear. However, cutting prices is not the only way of securing additional off-peak business. It may also be done by producing "to stock," by scheduling postponable work to be done at such times, by special selling efforts, by taking on side lines, or by dovetailing together profitable lines of business, and bearing the expense involved in dividing one's attention and in shifting labor from one kind of work to the other.

The third thesis, still more important, deals with what I have called the "shifting and conversion of overhead costs." Whenever anybody who has any "overhead costs" sells his product or his services he puts the "overhead costs" into the price he charges and thus they nearly always become a "variable cost" to the purchaser. Thus most of the "constant costs" of business disappear as constant costs and are converted into "direct" or "variable costs," from which fact we may conclude that there is a great deal more "overhead cost" in business than is evident at first sight.

Telephone rates furnish a good example of this shifting and con-

[1] This would of course require careful study of sectional conditions.

version. A telephone company has some expenses that do not vary with number of calls and some that do. If it charges so much per call, it converts its "constant costs" into a "variable charge" on the consumer; and, as a result, the cost of added calls to him is more than it is to the company, and he may be deterred from taking calls that would be worth more than they would cost. On the other hand, if the company charges so much per month, independent of number of calls taken, their "variable costs" are converted into a "constant charge" on the consumer and he may waste calls, taking service that is not worth to him as much as it costs the company. Insurance furnishes another interesting type of conversion. Here a cost that varies (though not in regular proportion to output) is converted into a "constant cost," with the result that accidents do not cost the individual as much as they cost society. This subject will come up again in connection with my final thesis.

While the cost of materials to a producer who uses them is a direct or variable cost, a considerable part of the original cost of the materials is likely to be an overhead or constant cost. True, there is one thing about raw materials that differentiates them from costs of labor or costs of plant, and that is that if they are not used today they can be used at some future time, and if you use them today you sacrifice that future use. Thus, in a general way, materials are properly treated as a variable cost. But the financial reckoning, at least in time of depression, distorts the amount of this cost. The financial expense at such times involves the sacrifice of a present value based on expected higher prices in the future. If it is not worth while working up the materials now, that means that this future use is outbidding the present demand for goods. True, in terms of money; but in terms of need the higher price represents the less pressing want, not the more pressing. People need goods more in time of depression than in time of prosperity, especially those who are out of work.

The question is complicated by the fact that manufactured goods will go to fill the warehouses, not directly into the hands of consumers. From this angle, the desideratum is that the replenishment of stocks should be a steady flow, and the penalty of failure is a clogging of the outlet for the goods already produced, and a shrinkage of their effectiveness in satisfying wants. Anything that makes goods move along more steadily is to be credited with a reduction of this waste.

This proposition appears to contradict the generally accepted doctrine that fluctuating prices serve a social purpose by saving goods for the times of greatest scarcity and need. This is true of famines and similar shortages, but it is emphatically not true where the time of shortage for the consumer is precisely the time of low prices, while high prices accompany prosperity and plenty. What about labor?

If has often been recognized that the special training of a professional man is a form of investment and that the reward necessary to compensate it is a kind of overhead cost. Accordingly, he frequently follows the principle of charging what the traffic will bear, distributing his overhead in much the same way as a public utility. But why confine this principle to doctors and lawyers? Common labor requires an investment and a very definite maintenance charge, and this maintenance is not vastly greater because a man goes to work than it would be if he were idle. In fact, one can say that when a laborer is out of a job somebody must either bear the full cost of his necessary maintenance or else his working powers will deteriorate, and that will be a still heavier loss. The unemployed often get along on surprisingly few cents a day, but those few cents do not represent what society is losing as a result of their being out of work. Almost any wages would be just that much to the good, and we can afford to ignore any possible "psychic cost" of working eight hours a day, rather than walking the streets. A ten-hour day may cost the laborer more in fatigue and sacrifice than an eight-hour day. Also a stop-gap job may make it harder for a man to get the kind of work he really wants and is fitted for, but if this is guarded against, and it is a question of having a job or having none, the "psychic cost" of any tolerable job is a minus quantity to a healthy individual.[4] Thus, we may say that most of the ultimate costs of labor to the laborer and to the community are constant costs and that they are translated into variable costs to the employer by our customary system of wages, in much the same way in which the constant costs of a telephone exchange are translated into a variable charge when the user pays so much per call.

From this point of view it appears to be almost a matter of accident that capital costs are regarded as constant and labor costs as variable. It is all a matter of the way the contracts are drawn, and while there

[4]Here we are using the principle laid down in the introduction to this paper, that "differential cost" depends on the alternative that is offered. It may be objected that I am comparing *work with wages* to *idleness with none* and that I have not separated, in good Benthamite fashion, the value of the wages from the cost of the work; that a man would rather rest or hunt for a lucrative job than work *for nothing* and that, if he got his wages whether he worked or not, he would rather not work. These are plausible propositions, granting their assumptions, but the assumptions are unreal, for *these alternatives are not offered.* What is offered is (1) work, with some "psychic cost" (amount undetermined), (2) idleness, with a "psychic cost" which is, on the whole and for the most people, greater, *over and above the immediate deprivation of wages and consequent physical comforts.* In neither case do we need to measure the absolute amounts, since we are cancelling them against each other, as already suggested. However, granting the full truth of these objections, they would require only an amendment, to the effect that the money equivalent of the differential psychic cost of work is far less than the laborer's necessary maintenance. This would leave untouched the main proposition, that most of the ultimate cost of labor is a residual or constant cost. No one proposes that laborers should work for nothing, nor that they should be paid the same wages whether they work or not.

is substantial reason for drawing them in the customary way, still it would be quite possible to make labor a constant cost by putting it on a salary basis, as the higher officials are now, and to make capital a variable cost by leasing it for a payment depending upon the use that is made of it. The United Shoe Machinery Company, the Dick Mimeograph Company, and others, have furnished precedents for an arrangement of this kind—not always with universal satisfaction. Royalties on patented processes are often in this form. This, then, is our fourth thesis: that the proportion of constant cost appearing in the financial accounts is optional, and can be changed by contract or by public action.

We now come to the fifth thesis: namely, that with reference to business depressions most of the costs of industry are constant; that consequently it would pay the industrial community as a whole to keep going even though the product were worth next to nothing above the value of the basic materials, and that even this minumum would be radically reduced by a correct social accounting. It goes without saying that industry as a whole does not follow out this principle. Single enterprises are often willing to ignore their overhead costs, in the effort to maintain output, but they must cover their variable costs and their variable costs include a lot of other people's overhead costs. In order to produce results by this method everybody would have to do the same thing at once, including the producer of raw materials, the retailer who has invested in a stock of goods at the old prices, and labor at every stage of production. All would have to be willing to sell their product for what it would bring, down to the actual differential cost of working, rather than standing idle. If this miracle were to happen, another miracle would follow; namely, that it would not require heavy reductions in prices to stimulate demand. Everybody, by keeping his laborers at work and in the market for goods, would be protecting the demand for everybody else's commodities; but if each acts by himself, he bears a heavy burden and receives only a minute part of the benefit. Thus it is the part of individual financial wisdom to protect one's overhead outlays and let the demand fall off.

The situation is analogous to that of separate banks trying to maintain specie payment in time of panic. If they could all jointly announce that they would pay out their reserves to depositors as long as there was any money to pay out, they would not have to pay out any dangerously large amount. However, what happened was that banks suspended specie payment to protect their reserves, whose only use was to maintain specie payment. It required a coöperative organization to make the reserves available, and it will require some means of organized action in the industrial field, at least as effective as the

federal reserve system in the banking field, before the waste of unemployment can be avoided.[8]

To sum up, financial accounting says that goods at such times are not worth what they cost. Socially speaking, this is a fallacy; a pecuniary fiction. Goods are worth producing whenever there is a waste capacity which could be used to produce them, and the utilizing of this waste capacity costs the community substantially nothing, no matter what it may cost the private employer under the customary system of wages.

Passing over the sixth thesis we come to the seventh and last. This deals with what we may call the "socializing of overhead costs," or the problem of assessing, collecting, and apportioning them in the way demanded by community efficiency rather than by customary financial contracts and accounts. It is impossible to lay down in advance just what detailed method of allotting the community burdens would best promote this end. One thing which might promote it would be a concentrating of overhead costs so that some one responsible for the conduct of industry would have something like as large a percentage of overhead costs in his budget as the community has. The only person who can play this part is the employer, and one of the lines of advance might be to convert certain indirect social costs into overhead charges on the industry. Compulsory insurance for accidents is a case in point, and has resulted not merely in lightening the suffering from accidents but in reducing the number very materially.

Costs should be apportioned on a basis of responsibility, but responsibility is a somewhat elastic term. One may be responsible for doing something to increase costs or for failing to do something to diminish them and it is sometimes hard to draw the line, especially when it becomes a question as to who is responsible for the burdens of a business depression, which is an unexpected by-product of changes in methods of production—changes which were very profitable to those who made them and are still profitable for those who follow their lead. Roughly, every business helps create the community problems of industrial unrest, congestion, and unemployment. Its exact responsibility is untraceable, but unless it does something to help lighten these burdens or to help bear them, it is not paying its full costs. In a still broader sense, we may say that one kind of responsibility is gauged by the opportunity which a person has to improve the situation by his own efforts. This opportunity is shared by everybody in the community, laborers, employers, and others; but the employer can often do the most decisive things.

So far as there are costs which are truly variable for industry as a whole, they should be laid *as variable costs* on all those who have

[8] Cf. W. W. Stewart, American Economic Review, *Sup.*, Mar. 1922, pp. 42-43.

opportunities to economize these costs. For this reason insurance is good in that it enlists the interest of the insurance company in organized efforts to reduce losses, but bad if it frees the insured from all damage and all incentive to reasonable care and caution. Therefore property insurance should generally not cover the full amount of the loss.[6] So far as there are costs which are truly constant for industry as a whole, they should be so distributed as not to form an obstacle to the fullest utilization of these constant outlays, or rather, of the productive capacities they represent. Such an obstacle is likely to result whenever constant costs are converted into variable charges in the process of shifting; hence they should be made into constant charges so far as practicable. So far as this is not practicable, the community should assume whatever burdens are necessary to promote full utilization, but without any wholesale subsidizing of private industry. Each industry is properly responsible for all its costs, including its overhead.

The kind of shifting that converts constant costs into variable appears to be, to a large extent, inevitable under private enterprise. In order to abolish it, prices for all goods would have to be made on some such principle as the "readiness to serve" system of rates for electric current, where the customer pays a lump sum to cover the constant costs, and then pays a separate charge for current, covering those costs that vary with output. This plan could hardly be followed with commodities that could easily be resold.

Labor, however, is not a commodity, and might be able to work wonders if it directed its bargaining power toward selling its services for a substantial minimum retainer plus a moderate charge proportioned to work actually done, or some sliding scale based on this principle. Then anything which any employer could do to regularize employment would yield him immediate benefits in lower unit costs of labor. The chief difficulty would be that those who need this system worst would not be strong enough to secure it; nevertheless they would still benefit from any general stabilization that might result. In this way a large amount of good might be done—vastly more than by merely trying to make the hourly wage high enough to pay for all lost time. This accepts the evil and does nothing to promote a cure. On the other hand, it would not be wise to force employers to pay salaries equivalent to the whole of labor's overhead costs, for labor's incentive to work must also be preserved. However, something in this direction would be a pertinent experiment.

The experiment might show that labor needs the fear of losing the job in order to do a fair day's work, but that is not likely. At present,

[6] This idea is developed by A. Blauvelt, "The Public Insurable Interest," *Jour. Pol. Econ.*, XXIII, 599-611 (June, 1915).

labor commonly works so much harder when a lay-off threatens that sometimes a reduced force produces an increased output. This, however, is a poor argument for the fear of the job as a stimulus tending to increase society's total output, for it shows on the face of it that *this motive does not work at the only time it has a real chance to stimulate increased output*, namely, in time of active demand. It only works when output is already limited by a reduced demand and cannot be much increased by the worker's personal efforts. Hand in hand with this goes the impulse to "nurse the job" whenever it can be done without fear of discharge, and this has a real and material effect in reducing output during active times.

The only condition under which the fear of discharge can act as a real and effective stimulus to increased production is a condition in which discharge is for poor performance only, not because of overproduction. If a system could be devised whereby the faithful worker would be sure of a minimum retainer at all times, plus a differential wage for work done, and only the shirker could be discharged, and if this system could really work as intended—a large "if"—the net result would certainly be more diligent work, not more shirking.

So far as concerns encouraging the employer to do his utmost to stabilize employment, an equivalent incentive might be put in a different form; for instance, the cost of unemployment relief might be assessed on industries in proportion to some index of their responsibility for irregular employment.[7] Broadly speaking, anything the community might do to cure the disease of the business cycle would represent a legitimate application of the theory of social overhead costs, and might gain support from the doctrine that almost any useful goods are worth what they cost to produce in times of general unemployment, in the light of correct community accounting.

All of which is a rather involved way of saying that idleness is waste and that anything idle labor can do is better than nothing. Perhaps the entire argument would be superfluous but for the fact that economics and business are both committed to judging whether goods are economically worth their cost according to the financial expense involved under existing forms of contract. Having once started to calculate costs and values after this fashion, there is nothing for it but to carry the calculation far enough to show that in the end it does not disagree with common sense.

[7] *Cf.* W. C. Mitchell, "Controlling Business Cycles," American Economic Review Sup., Mar., 1922, pp. 27-8.

COMMERCIAL RENT AS AN EXPENSE AND ITS RELATION TO PROFITS

By Horace Secrist

Northwestern University

I. *Introduction*

In the field of economic science, the twentieth century, and more particularly the years since the beginning of the Great War, have been characterized by an impetus in research. There has been a definite attempt to make economics a more truly inductive science and to secure a factual basis for generalizations concerning it. This movement is so well understood that there is no need of my reviewing its developments or of indicating the stage at which it has arrived. It is sufficient to point to the creation of research organizations within the government and outside, the purpose of which is largely if not solely to discover and to state the underlying principles upon which modern business and industry are conducted, and to create in the minds of business men and others the need for a more perfect accounting and understanding of the facts upon which business judgments should be made.

The Bureau of Business Research of Northwestern University has been making its small contribution toward this end, and I am asking your indulgence while some of the conclusions respecting one phase of business, and the methods of arriving at them in a single field of trade are described. For this purpose, use is made of data taken from the records of retail clothiers. Moreover, what is presented is in continuation of the Bureau's previous studies which have been primarily undertaken, first, to establish norms or standards of expense and cost distribution obtaining in retail clothing stores; and, second, to discover, if possible, the underlying tendencies of change characterizing margins, expenses, and profits for such stores in different periods and under different conditions of operation.

There are three points of view from which the determination of such standards and tendencies may be approached; first, that which relates to time; second, that which has to do with place or location; and, third, that which involves varying conditions of operation at a single time or place. The conclusions reached in the Bureau's previous studies have pointed unmistakably to the fact that, out of a

mass of information comparable in character, certain underlying principles may be discovered which are of value not only to merchants themselves in day-to-day operations, but also to economic science. This fact prompted the Bureau to continue its analysis, and it is the results of this study which are here presented.

This paper has to do with commercial rent as an expense and its relation to profits in retail clothing stores. The plan of presentation falls naturally into two parts: first, that which bears upon the amounts of rent and their tendencies to change in point of time, location, and condition; and, second, that which considers the relationship which exists between the amounts of commercial rent paid and the profits which are realized. The two viewpoints are complementary, and the methods of stating them require not only the use of a large amount of detailed data, but also the rather hazardous undertaking of drawing conclusions.[1]

One body of data, called Group I, covering the years 1914, 1918, and 1919, was secured from retailers by the Bureau of Business Research in coöperation with the National Association of Retail Clothiers. These data are identical in most respects with those used in the Bureau's other studies. The second, called Group II, covering the years 1916 to 1920, inclusive, was secured by the National Association of Retail Clothiers for the Joint Commission of Agricultural Inquiry in Washington. Acknowledgments are herewith made for the privilege of using the data in this study.

It is hardly necessary to state that every care has been taken to make the data comparable and complete. So far as Group I is concerned, data on every important item covering operation were furnished to the Bureau. The store records from Group II relate solely to three items of operation—net sales, total operating expenses, and rent. Not all of the records which were used by the Joint Commission of Agricultural Inquiry are here employed, many of them being imperfect and incomplete for the use of this study. In both cases, however, the writer feels that whatever imperfections the data have, they do not seriously disturb the comparisons nor invalidate the conclusions which are made.

[1]The writer is fully aware of the danger of "proving" things by statistics, and of the disrepute into which economic and statistical science has frequently been brought by the desire for definite and final conclusions for every problem. It is hoped that he will not be accused of placing too great faith in the infallibility of his data or the finality of his conclusions.

II. *Tendencies of Change in Commercial Rent in Relation to Sales and Total Expense*

In order to secure a measurement of the amount of rent and of its relation to sales and total operating expenses, not one but a number of criteria have been selected. It is necessary when summarizing mass information to choose some form of an average to represent the conditions obtaining at different periods of time, at different places, or for different operating conditions. The most satisfactory single measure for this purpose is the arithmetic mean. This average, however, because of its peculiar properties, needs to be supported by other appropriate measures, and for this purpose the median and the quartiles are used. Moreover, as tests of the significance of these averages, three additional measurements are employed—the semi-quartile range and the coefficients of dispersion and skewness based on the quartiles. These latter measurements describe the nature of the distributions to which the averages, medians, and quartiles apply, thus compensating in part, at least, for the omission of the several frequency distributions.

In the tables relating to Part I, both groups of stores are presented for each of the topics considered. This is done, first, to indicate the extent to which the tendencies agree for both groups; and, second, to broaden the field of comparison. It is impossible to point out for each table all the peculiarities and differences which the details show. The best that can be done in the space available is to indicate the general conclusions which may be drawn from the data.

Table I shows from year to year for 226 identical stores for 1914, 1918, and 1919, and for 181 identical stores for 1916 to 1920, inclusive, the amounts and per cents of increase in sales, in rent, and in total expense. For Group I, for the entire period, sales increased 127.5 per cent, rent 38.7 per cent, and total expense 105.3 per cent. The corresponding increases between 1916 and 1920 for each of the items of operation for the 181 stores were 111.3, 41.9, and 114.1 per cent. For both groups of stores from year to year as well as over the entire period, sales, rent, and total expense increased, although the rate of increase is much slower for rent than for either total expense or sales. The graphic part of Table I shows at a glance the nature of these increases.

TABLE I

AVERAGE AMOUNTS OF SALES, OF RENT, AND OF TOTAL EXPENSE PER STORE, BY YEARS

Date	Years	Number of Stores	Average Sales per Store			Average Rent per Store			Average Total Expense per Store		
			1			2			3		
			Amount	Per Cent Increase		Amount	Per Cent Increase		Amount	Per Cent Increase	
				Graphic	Actual		Graphic	Actual		Graphic	Actual
				0 25 50 75 100 125			0 25 50			0 25 50 75 100	
Group I	1919	296	$157,382		157.5	$2,784		30.7	$38,784		105.5
	1918	296	69,336		59.5	2,503		24.7	21,436		55.1
	1916	296	61,068			2,007			13,825		
Group II	1920	181	297,940		111.5	6,072		41.9	58,574		114.1
	1919	181	218,292		92.9	5,550		32.0	42,985		83.3
	1918	181	149,546		32.8	5,801		21.5	27,326		36.9
	1917	181	129,756		16.2	4,770		11.6	32,472		19.1
	1916	181	112,696			4,280			27,271		

Bureau of Business Research, Northwestern University.

In Table I, all of the stores in each of the years are considered as a total, irrespective of their location and size. In Table II, the 181 identical stores which reported for each of the years from 1916 to 1920, inclusive, are classified by the size of the city in which they are located. The upper part of the table shows the per cent increases in total net sales in each year compared with 1916, and also from year to year. When the entire period is considered, it will be noticed, first, that sales increased faster in the stores in large cities than in those in small cities; second, that the increase in sales for all of the stores and for each group as located was noticeably larger between 1918 and 1919 than between any other years; and, third, that the increase in sales between 1919 and 1920 was relatively smaller than between any of the other years under consideration.

The middle part of Table II shows for the 181 stores classified by location, the per cent increases in rent, first, in each year based upon 1916; and, second, from year to year from 1916 to 1920. As in the first part of the table, when the entire spread of time is considered, rents are shown to have increased more rapidly in stores in the large cities than in stores in the small cities. From year to year, however, no such general tendency exists, some store-groups having had their rent increased early and some late. From year to year over the entire period, when all stores are grouped together, rent, while increasing, increased at a diminishing rate.

TABLE II

PER CENT INCREASES FROM YEAR TO YEAR IN TOTAL NET SALES, IN RENT, AND IN TOTAL EXPENSE FOR STORES CLASSIFIED BY SIZE OF CITY

Size of City (in 000's)	Number of Stores	Per Cent Increases in Total Net Sales							
		1916 to 1917	1916 to 1918	1916 to 1919	1916 to 1920	1916 to 1917	1917 to 1918	1918 to 1919	1919 to 1920
Average	281	15.2	38.8	85.9	111.5	15.2	15.3	46.0	9.0
Under 10	82	12.0	29.6	89.1	98.7	15.0	12.6	46.0	5.5
10 to 20	89	16.9	30.7	89.6	96.1	16.9	11.8	44.3	4.0
20 to 40	87	18.5	35.5	85.1	100.2	18.3	11.8	47.8	8.1
40 to 100	27	19.0	48.6	94.8	107.2	19.0	24.8	31.1	6.4
100 & over	36	13.5	27.1	97.4	129.6	13.5	12.0	55.3	12.8

Size of City (in 000's)	Number of Stores	Per Cent Increases in Rent							
		1916 to 1917	1916 to 1918	1916 to 1919	1916 to 1920	1916 to 1917	1917 to 1918	1918 to 1919	1919 to 1920
Average	161	11.6	21.5	28.0	41.9	11.6	8.8	8.8	7.4
Under 10	52	5.8	6.5	13.0	30.7	5.8	0.6	6.0	15.7
10 to 20	25	5.7	19.4	23.7	47.2	5.7	12.9	3.6	17.4
20 to 40	27	4.3	9.5	25.0	29.2	4.3	4.8	12.4	3.1
40 to 100	27	9.1	16.7	26.1	40.8	9.1	7.0	8.1	11.6
100 & over	30	14.8	26.8	28.4	44.6	14.8	10.4	9.1	6.4

Size of City (in 000's)	Number of Stores	Per Cent Increases in Total Expense							
		1916 to 1917	1916 to 1918	1916 to 1919	1916 to 1920	1916 to 1917	1917 to 1918	1918 to 1919	1919 to 1920
Average	161	19.1	36.9	85.8	114.1	19.1	15.0	35.9	16.8
Under 10	52	16.0	32.8	87.8	88.1	16.0	14.5	39.0	14.0
10 to 20	25	12.8	27.1	84.8	90.6	12.8	12.6	39.8	15.6
20 to 40	27	15.2	29.4	90.5	89.6	15.2	12.4	38.8	13.8
40 to 100	27	23.0	45.8	88.0	112.0	23.0	17.0	27.2	15.2
100 & over	30	19.5	37.2	95.6	129.0	19.5	14.8	41.2	18.2

Bureau of Business Research,
Northwestern University.

The above conditions for rent, however, do not obtain for total expense, as is indicated in the lower section of Table II. This part of the table shows, first, that the rate at which total expense increases becomes larger as the size of the city in which the stores are located increases; second, that the largest increase in total expense for all the stores together, and for each of the groups as located, reached its maximum in 1919 as compared with 1918; third, that total operating expense increased relatively more between 1919 and 1920 than did rent or total net sales.

Table II, in brief, supports the conclusions reached in Table I, that from year to year, total net sales, rent, and total expense increased in retail clothing stores.

TABLE III

MEASURES AND COEFFICIENTS OF EXPENDITURES FOR RENT PER $100 OF TOTAL NET SALES FOR RETAIL CLOTHING STORES CLASSIFIED BY YEARS

Data	Years	Number of Store-years	Rent per $100 of Total Net Sales						Coefficients (Based on Quartiles)	
			Arithmetic Mean			Median	Quartiles			
			Amount	Per Cent Graphic (0 25 50 75 100 125)	Per Cent Actual		First	Third	Semi-quartile Range	Dispersion	Skewness
	Average	678	$2.67		100.0	$2.56	$1.70	$3.42	$1.86	.37	+.15
Group I	1919	226	2.19		82.0	1.96	1.39	2.85	0.73	.21	+.24
	1918	226	2.80		104.9	2.59	1.76	3.69	0.97	.36	+.14
	1914	226	3.58		134.1	3.16	2.22	4.47	1.13	.34	+.19
	Average	905	3.06		100.0	2.52	1.76	3.78	0.93	.32	+.19
	1920	181	2.55		83.3	2.05	1.49	3.16	0.78	.33	+.25
Group II	1919	181	2.59		84.6	2.02	1.41	3.78	0.69	.33	+.09
	1918	181	3.48		113.7	2.71	1.91	3.57	0.91	.32	+.12
	1917	181	3.69		120.3	2.88	2.09	4.07	0.99	.32	+.10
	1916	181	3.80		124.3	3.09	2.30	4.17	0.94	.29	+.16

Bureau of Business Research, Northwestern University. Averages

The actual amounts of sales and rent shown in Table I for the two groups of stores are placed in relation to each other in Table III. That is, this table shows the amounts of rent per $100 of total net sales which characterized in each of the years identical stores in the two groups. In order to measure rent, so expressed, averages (arithmetic means) medians, and quartiles are used. These are supported by certain other measures descriptive of the averages. The graphic part of the table shows unmistakably the fact that the average amounts of rent per $100 of total net sales decreased in each of the groups from year to year. A decrease is also indicated by the medians and quartiles for Group I and, with the exception of 1920, for Group II. When for two groups of stores three measurements essentially agree[3] as to the direction of change, it is safe to

[3]A test of the uniformity of the direction of change among these averages from year to year is found in the coefficient of concurrent deviation. The coefficients are as follows:

COEFFICIENTS OF CONCURRENT DEVIATIONS OF MEASURES OF RENT PER $100 OF TOTAL NET SALES FOR STORES BY YEARS

Years	Store Group	Coefficients of Concurrent Deviations		
		Arithmetic Means and Medians	Medians and First Quartiles	First and Third Quartiles
1916 to 1920	II	+ .92	+ .89	+ .98

conclude for this field of retailing and for the period covered that a general tendency has been discovered—a tendency for commercial rent in relation to sales to decrease from year to year. In other words, while both rent and sales were increasing, sales on the whole increased faster, thereby producing decreased rentals in terms of sales.[3]

Generalizations from Table III are based upon three forms of averages. In order to complete and to substantiate this presentation, Table IV is given, which shows for each of the years 1917 to 1920, inclusive, the amounts of rent per $100 of sales obtaining in these years for the stores when classified according to the rent which they paid in relation to sales in 1916. That is, Table IV answers this question: Has the general tendency for rents to decrease in relation to sales, as measured by the averages (arithmetic means) shown in Table III, obtained when the same group of stores is classified in more detail, distinction being made according to the relative amount of rent paid and the location of the stores? As indicative of the change, when measured in this detailed form, the conditions for a single group of stores may be selected. For the 103 stores, paying in 1916 between $2 and $4 in rent per $100 of total net sales, 82.5 per cent paid the same amount in 1917; 70.9 per cent in 1918; 40.8 per cent in 1919; and 41.7 per cent in 1920. That is, the proportion of stores paying this amount became less from year to year in comparison with 1916—the center of gravity shifting to the next lower group. Similar shifting is observed in the other groups.[4] Generally speaking,

[3]The tendencies shown in Table III are based upon an average for 3 and 5 years, respectively, for stores without regard to size or location. Similar tendencies also obtain—although not without some exceptions—for stores when classified both by size and location.

Through the courtesy of the Bureau of Business Research, Harvard University, I have been supplied with the following data on the relationship of rent to net sales in identical stores.

Years	Type of Business					
	Retail Jewelry		Retail Shoe		Department Stores	
	No. of Stores	Per Cent	No. of Stores	Per Cent	No. of Stores	Per Cent
1918			73	2.7		
1919	35	3.7	73	2.3		
1920	35	4.0	73	2.4	149	2.1
1921	35	5.8	73	2.9	149	2.6

[4]A slight increase occurs between 1919 and 1920 for the total and for some of the groups as classified.

in each successive year, rent constituted a smaller proportion of sales than it did in the base year, 1916.

It is obvious that the amounts of commercial rent, while differing from year to year, also vary absolutely according to the location of the stores as between small and large cities. It is not so obvious, however, that there is a relative increase or decrease in amounts of rent in relation to sales under these conditions. Table V is presented to show the facts in this respect when stores for the combined periods 1914, 1918, and 1919, and 1916 to 1920, inclusive, are classified according to location. In this case, as in those preceding, various averages are used to measure the change. Based upon the arithmetic means, rent in relation to sales increases as cities increase in size. There is a single exception to this rule for the stores in Group I, but no exception in Group II. In Group II the direction of change, as indicated by the arithmetic means, is duplicated without exception by the medians and the two quartiles. In Group I, the median indicates an uninterrupted increase from city-group to city-group while the quartiles show this condition with a single variation in each case.[1]

For the two groups of data in Table V, the amounts of rent per $100 of total net sales are shown for stores for the combined years. Table VI, on the other hand, shows the per cent increases or decreases of rent per $100 of total net sales for the 181 stores reporting for consecutive years. For the combined stores in each of the years, the amounts of rent in relation to sales are smaller than those obtaining in 1916. Moreover, with a single exception, prior to 1918 this con-

[1] A test of the uniformity of the direction of change among these averages in stores from city-group to city-group is found in the coefficient of concurrent deviation. The coefficients are as follows:

COEFFICIENTS OF CONCURRENT DEVIATIONS OF MEASURES OF RENT PER $100 OF TOTAL NET SALES FOR STORES BY SIZE OF CITY

Years	Store Group	Coefficients of Concurrent Deviations		
		Arithmetic Means and Medians	Medians and First Quartiles	First and Third Quartiles
1918 to 1919	I	+.90	+.93	+.90
1916 to 1920	II	+1.00	+.94	+.89

TABLE IV

STORES IN RETAIL TRADE SPECIFYING AMOUNTS OF RENT PER $100 OF TOTAL NET SALES IN 1917, 1918, 1919, AND 1920, CLASSIFIED BY AMOUNTS OF RENT PAID PER $100 OF TOTAL NET SALES IN 1916

Size of City (in 000's)	Rent per $100 of Total Net Sales in 1916	Number of Stores	Rent per $100 of Total Net Sales															
			1917				1918				1919				1920			
			Under $2	$2 to $4	$4 to $6	$6 & over	Under $2	$2 to $4	$4 to $6	$6 & over	Under $2	$2 to $4	$4 to $6	$6 & over	Under $2	$2 to $4	$4 to $6	$6 & over
Total	Total	161	40	98	21	12	11	98	14	16	89	71	12	5	88	78	12	4
	Under $2	70	37	2	1		21	4	1		39	8			25	3		
	$2 to $4	105	13	95	4	1	16	75	2	2	50	43	2		56	45	1	1
	$4 to $6	55		1	17	7		20	9	4	8	27	4		6	31	7	
	$6 & over	15			3	12		1	2	10		4	6	5		7	5	3
Under 40	Total	106	31	80	13		40	64	4		71	37			70	37	1	
	Under $2	67	25	2			23	4			36	1			23	4		
	$2 to $4	67	6	66	1		17	49	1		44	23			44	22	1	
	$4 to $6	14		3	11			11	3		1	13			3	11		
	$6 & over																	
40 & over	Total	55	9	32	8	6	11	34	10	10	18	34	12	5	18	39	11	4
	Under $2	3	2		1		2		1		3	1			2	1		
	$2 to $4	38	7	29	3	1	9	24	1	3	15	19	2		14	21		1
	$4 to $6	12		3	12	2		9	5	4	1	14	4		2	10	7	
	$6 & over	15			3	13		1	3	13		4	6	5		7	5	3

Bureau of Business Research,
Northwestern University.

dition held for every group as located. Between 1919 and 1920, however, for three of the groups, rent in relation to sales increased. An inspection of the table shows that the maximum per cent decrease from 1916, for most of the store-groups, occurred in 1919, and that the decrease between 1919 and 1920 for the group as a whole was comparatively small. There seems to be no general tendency for the

TABLE V

MEASURES AND COEFFICIENTS OF EXPENDITURES FOR RENT PER $100 OF TOTAL NET SALES FOR RETAIL CLOTHING STORES CLASSIFIED BY SIZE OF CITY IN WHICH LOCATED

Date	Size of City (in 000's)	Number of Store-years	Rent per $100 of Total Net Sales							Coefficients (Based on Quartiles)	
			Arithmetic Mean			Median	Quartiles		Semi-Quartile Range		
			Amount	Per Cent Graphic 0 25 50 75 100 125 150	Per Cent Actual		First	Third		Dispersion	Skewness
	Average	678	$2.67		100.0	$2.56	$1.70	$3.72	$1.01	.37	+.15
Group I 1914, 1918, 1919, Combined	Under 10	309	2.00		74.9	2.09	1.46	2.92	0.69	.32	+.18
	10 to 20	99	2.25		84.3	2.03	1.74	2.79	1.03	.37	+.12
	20 to 40	105	2.59		97.0	1.73	1.50	3.70	0.90	.38	+.08
	40 to 120	93	3.77		141.2	3.79	2.76	4.87	1.11	.29	+.07
	120 & over	72	2.67		100.0	2.89	2.56	3.75	1.58	.38	+.13
	Average	905	2.06		100.0	2.52	1.76	3.62	0.93	.35	+.13
Group II 1920 to 1920, Combined	Under 10	260	1.72		56.2	1.65	1.30	2.46	0.68	.31	+.09
	10 to 20	145	2.12		83.3	2.34	1.71	3.09	0.69	.23	+.19
	20 to 40	135	2.44		79.7	2.70	1.86	3.56	0.80	.29	+.1
	40 to 120	135	2.67		84.0	2.81	2.05	3.67	0.91	.31	+.17
	120 & over	180	3.94		126.8	3.99	2.77	6.58	1.80	.41	+.21

Bureau of Business Research,
Northwestern University.

Averages

rates of decrease to vary directly with the size of the city in which the stores are located. This is to be explained, no doubt, by the fact that increases in rent occurred at different times for the different stores, depending upon the nature of the rental contract. Had a longer series of years been available for study, some regularity in respect to this fact might have been developed. Table VI is introduced to supplement Table V, in which the changes in amounts of rent from city-group to city-group are based upon a five-year period.

TABLE VI

PER CENT CHANGES FROM YEAR TO YEAR IN RENT PER $100 OF TOTAL NET SALES FOR STORES CLASSIFIED BY SIZE OF CITY

Size of City (in 000's)	Number of Stores	Per Cent Increases (+) or Decreases (-) in Rent per $100 of Total Net Sales							
		1916 to 1917	1916 to 1918	1916 to 1919	1916 to 1920	1916 to 1917	1917 to 1918	1918 to 1919	1919 to 1920
Average	181	-3.2	-8.4	-31.8	-32.9	-3.2	-5.4	-25.6	-1.6
Under 10	52	-8.0	-17.8	-40.4	-33.3	-8.0	-10.6	-27.6	+11.9
10 to 20	29	-9.6	-8.8	-34.5	-24.9	-9.6	+0.8	-29.2	+12.8
20 to 40	27	-7.1	-12.8	-33.7	-35.6	-7.1	-6.2	-23.9	-2.9
40 to 120	37	-8.4	-21.3	-35.1	-32.1	-8.4	-14.1	-17.6	+4.6
120 & over	35	+1.0	-0.2	-30.0	-35.0	+1.0	-1.2	-29.9	-7.1

Bureau of Business Research,
Northwestern University.

Earlier studies of the Bureau made it clear that commercial rent in relation to sales is a function not only of time and store location, but also of store size. Accordingly, in Table VII, the stores under consideration have been classified according to both size and location, the amounts of rent for the two groups of stores being based upon averages for three and five years, respectively. When stores are classified in this manner, the amounts of rent per $100 of total net sales are shown to decrease with the increasing size of stores. For Group I all measures reveal this tendency. For Group II there is a single exception to this general rule, as exhibited by the arithmetic means, for the stores in cities with population of 40,000 and over. A similar exception in the direction of change occurs when the medians are used. The quartiles, however, agree in indicating that as stores increase in size, when they are classified by location, rent per $100 of net sales decreases. It is difficult in the light of this cumulative evidence to conclude otherwise than that commercial rentals, while undoubtedly increasing as stores increase in size, actually decrease when expressed in the amounts of sales secured.

TABLE VII

MEANS AND COEFFICIENTS OF DISPERSION FOR RENT PER $100 OF TOTAL NET SALES FOR RETAIL CLOTHING STORES CLASSIFIED BY SIZE AND LOCATION

Data	Size of City (In 000's)	Classified Total Net Sales (In 000's)	Number of Store-years	Rent per $100 of Total Net Sales: Arithmetic Mean: Amount	Arithmetic Mean: Per Cent: Graphic (0 25 50 75 100 125 150 175 200)	Arithmetic Mean: Per Cent: Actual	Median	Quartiles: First	Quartiles: Third	Semi-Quartile Range	Coefficients (Based on Quartiles): Dispersion	Coefficients (Based on Quartiles): Skewness
Group I 1914, 1918, and 1919, Combined	Total	Average	676	$2.67		100.0	$2.56	$1.70	$3.72	$1.01	.27	+.15
		Under $40	215	3.09		115.7	2.76	1.91	3.88	0.99	.34	+.16
		$40 to $80	245	2.78		104.1	2.45	1.67	3.54	0.94	.36	+.17
		$80 to $120	101	2.65		100.0	2.42	1.55	3.70	1.08	.41	+.14
		$120 & over	59	2.39		89.5	2.69	1.63	4.00	1.19	.42	+.11
	Under 40	Average	215	2.24		83.9	2.27	1.56	3.17	0.81	.34	+.13
		Under $40	107	2.83		106.0	2.63	1.83	3.68	0.93	.34	+.14
		$40 to $80	107	1.78		66.4	2.20	1.54	2.96	0.71	.32	+.17
		$80 to $120	101	2.09		78.3	1.87	1.36	2.75	0.70	.34	+.15
		$120 & over	15	1.46		61.8	1.67	1.28	2.15	0.43	.28	+.31
	40 & over	Average	461	2.73		117.2	2.58	2.58	5.13	1.25	.32	+.21
		Under $40	18	4.79		209.4	4.98	3.50	6.62	1.56	.30	+.11
		$40 to $80	48	4.02		176.0	4.19	2.98	6.04	1.53	.34	+.21
		$80 to $120	32	4.01		157.7	3.87	2.89	5.53	1.32	.30	+.19
		$120 & over	43	3.32		95.8	3.15	2.67	4.36	1.15	.36	+.26
Group II 1918 to 1919, Combined	Total	Average	907	2.14		100.0	2.52	1.76	3.62	0.93	.35	+.19
		Under $40	114	2.39		97.4	2.84	2.14	3.80	0.83	.28	+.11
		$40 to $80	350	2.14		98.1	2.81	1.70	3.68	0.91	.35	+.21
		$80 to $120	316	1.76		88.9	2.40	1.88	3.84	1.00	.30	+.18
		$120 & over	371	2.74		105.9	2.66	1.90	3.81	0.95	.33	+.18
	Under 40	Average	340	1.19		48.0	2.16	1.55	2.94	0.71	.30	+.11
		Under $40	109	1.75		90.5	2.73	2.07	3.64	0.79	.27	+.14
		$40 to $80	211	0.93		74.5	2.26	1.56	2.99	0.72	.32	+.20
		$80 to $120	20	1.16		64.1	1.67	1.32	2.72	0.70	.35	+.18
		$120 & over	21	1.75		57.8	1.70	1.29	2.50	0.61	.32	+.17
	40 & over	Average	567	2.48		115.1	3.55	2.51	4.94	1.30	.34	+.21
		Under $40	5	4.17		168.5	4.80	3.33	7.35	1.67	.27	+.06
		$40 to $80	97	3.01		124.6	4.73	3.31	7.03	1.90	.35	+.19
		$80 to $120	132	2.06		124.0	3.72	2.69	4.84	0.97	.29	+.06
		$120 & over	138	2.05		108.8	2.81	2.07	3.98	0.96	.32	+.23

Bureau of Business Research, Northwestern University.

Averages

The presentation in Table VII for the stores in the two city-groups shows the condition in the combined years. If individual years are considered separately, the same general tendencies obtain. As a working principle for store operation, a knowledge of this tendency is important. Moreover, it carries a certain economic significance. High rentals are associated with large stores, but low rentals in terms of sales are correlated with such stores. As a by-product of this table, it is of interest to observe, for both groups of stores, that amounts of rent in relation to sales are larger, when measured by the different averages, in stores in large cities than for those of the same size in small cities. There is no unmistakable correlation, however, between the amounts of rent in relation to sales for stores when classified

solely by size. It is only when the double classification of location and size is made that the regularity in movement from group to group emerges.

In the preceding analysis, rent for stores in respect to time, place, and condition has been measured in absolute amounts and in relation to sales. It may also be measured as a proportionate part of total expense. Such a presentation is made in Tables VIII to XII, inclusive, use being made of the four different measures, with supporting details, as in the preceding discussion.

TABLE VIII

MEASURES AND COEFFICIENTS OF EXPENDITURES FOR RENT PER $100 OF TOTAL EXPENSE FOR RETAIL CLOTHING STORES CLASSIFIED BY YEARS

Data	Years	Number of Store-years	Rent per $100 of Total Expense: Arithmetic Mean: Amount	Arithmetic Mean: Per Cent: Graphic (0 25 50 75 100 125)	Arithmetic Mean: Per Cent: Actual	Quartiles: Median	Quartiles: First	Quartiles: Third	Semi-Quartile Range	Coefficients (Based on Quartiles): Dispersion	Coefficients (Based on Quartiles): Skewness
Group I	Average	678	$11.46		100.0	$11.76	$8.70	$16.15	$3.73	.30	+.18
	1919	226	9.81		85.6	10.38	6.96	13.83	3.44	.33	+.11
	1918	226	11.68		101.9	11.98	9.06	16.38	3.66	.29	+.20
	1914	226	14.52		126.7	13.76	10.16	18.56	4.20	.29	+.14
Group II	Average	905	12.65		100.0	11.73	8.30	15.71	3.71	.31	+.07
	1920	181	10.40		82.2	9.98	6.66	13.40	3.42	.34	+.07
	1919	181	11.30		89.3	10.10	6.96	14.52	3.77	.35	+.15
	1918	181	13.93		110.1	12.66	8.76	15.87	3.56	.29	+.07
	1917	181	14.71		116.3	12.94	9.52	17.08	3.56	.29	+.07
	1916	181	15.69		124.0	14.00	10.44	18.25	3.91	.27	+.09

Bureau of Business Research, Northwestern University.

Averages

In Table VIII, rent is shown to be a smaller proportion of total expense in the late than in the early years. The different averages for each group of stores are a unit in exhibiting this tendency. Moreover, the same condition tends to obtain when the stores are classified by location.* It should be remembered that in both groups,

*A test of the uniformity of change as shown by the different averages from year to year is found in the coefficient of concurrent deviations. The coefficients are as follows:

COEFFICIENTS OF CONCURRENT DEVIATIONS OF MEASURES OF RENT PER $100 OF TOTAL EXPENSE FOR STORES BY YEARS

Years	Store Group	Coefficients of Concurrent Deviations: Arithmetic Means and Medians	Medians and First Quartiles	First and Third Quartiles
1916-1920	II	+.89	+.96	+.96

the records of identical stores are studied. As shown in Table I, both the sales and total expense of these stores increased during the period under consideration. The rates of increase, however, were different, so that when the amounts of rent are expressed as proportionate parts of total expense, the condition shown in Table VIII results.

In Table VIII, rents, as proportionate parts of total expense, are shown as average amounts. Table IX, on the other hand, shows the number of stores in each of the years, 1917 to 1920, inclusive, paying classified amounts of rent based upon the conditions obtaining in 1916. The details of this table indicate that the number of stores, paying in a given year the same rental as in 1916, decreased through the successive years 1917 to 1920—the center of gravity shifting to smaller amounts.[1] A single illustration of this tendency will suffice to indicate the change. In 1917, 81.2 per cent of the stores, which in 1916 paid $8 to $16 per $100 of total expense, paid this same amount of rent; in 1918 the per cent was 73.3; in 1919, 54.5; and in 1920, 51.5. When the stores are further classified by location, the same general tendency holds.[1] The frequency distributions in this table support the general conclusions drawn from Table VIII.

Tables VIII and IX show the movement of rentals in terms of total expense in point of time. Table X shows the same thing in point

TABLE IX

[illegible]

Size of city (in 000's)	Rent per $100 of total expense in 1916	Number of stores	Rent per $100 of Total Expense															
			1917				1918				1919				1920			
			Under $8	$8 to $16	$16 to $24	$24 & over	Under $8	$8 to $16	$16 to $24	$24 & over	Under $8	$8 to $16	$16 to $24	$24 & over	Under $8	$8 to $16	$16 to $24	$24 & over
Total	Total	121	20	101	27	14	31	215	30	15	60	86	27	6	65	96	17	3
	Under $8	18	14	3		1	11	6	1		15	4	1		13	5		
	$8 to $16	101	15	80	6		14	74	5		43	55	5		47	50	6	
	$16 to $24	45		16	27	2		20	19	5	4	20	12	1	5	33	7	
	$24 & over	17			4	11			7	10		1	11	5		6	4	3
Under 40	Total	109	20	88	19	1	31	66	14		41	56	11		47	56	5	
	Under $8	15	12	3			11	4			12	3			11	3		
	$8 to $16	78	11	63	3		14	50			27	50	2		34	33	1	
	$16 to $24	16		2	15			12	10		2	14	6		2	17	3	
	$24 & over	4			1	1			4			1	3			3	1	
40 & over	Total	73	6	58	18	10	7	27	16	13	19	32	16	6	18	40	12	3
	Under $8	4	2	1		1	1	2	1		1	2	1		2	2		
	$8 to $16	53	4	33	5		6	24	5		15	16	1		13	19	1	
	$16 to $24	16		9	10	2		11	9	5	2	14	6	1	3	16	4	
	$24 & over	10			3	7			5	8			8	5		3	7	3

Bureau of Business Research,
Northwestern University

[1] A slight increase occurs between 1919 and 1920 for some of the stores.

TABLE X

MEASURES AND COEFFICIENTS OF EXPENDITURES FOR RENT PER $100 OF TOTAL EXPENSE FOR RETAIL CLOTHING STORES CLASSIFIED BY SIZE OF CITY IN WHICH LOCATED

Data	Size of City (in 000's)	Number of Store-years	Rent per $100 of Total Expense						Coefficients (Based on Quartiles)	
			Arithmetic Mean			Median	Quartiles		Semi-Quartile Range	Dispersion	Skewness
			Amount	For Cent Graphic (0 25 50 75 100 125)	For Cent Actual		First	Third			
	Average	678	$11.45		100.0	$11.76	$8.78	$16.15	$3.75	.30	+.18
Group I 1914,1918, 1919, Combined	Under 10	309	10.79		94.2	10.79	8.53	14.30	3.03	.27	+.19
	10 to 20	99	10.26		89.5	11.10	7.93	16.67	4.42	.36	+.26
	20 to 40	105	11.21		97.8	12.00	8.79	16.67	3.94	.31	+.19
	40 to 120	93	15.09		131.5	15.17	11.69	19.35	3.72	.24	+.12
	120 & over	72	9.95		86.9	14.35	9.72	21.00	5.61	.36	+.19
	Average	905	12.68		100.0	11.73	8.50	15.71	3.71	.31	+.07
Group II 1918 to 1920, Combined	Under 10	260	9.05		71.4	9.75	6.88	12.82	2.97	.30	+.03
	10 to 20	145	10.28		81.1	11.33	7.35	15.13	3.89	.35	-.02
	20 to 40	135	11.15		88.1	12.64	9.30	16.73	3.72	.29	-.04
	40 to 120	185	10.96		86.6	12.58	8.84	16.65	3.91	.31	+.04
	120 & over	180	14.63		115.4	10.19	10.53	24.10	6.83	.39	+.52

Bureau of Business Research, Northwestern University.

Averages

of location, the respective amounts being based upon the entire period under observation. The averages show that rent as a part of total expense increases as the size of the cities in which these stores are located increases. There are a few exceptions to this rule. On the whole, however, the direction of change is surprisingly certain when it is remembered that both rent and total expense are determined not only by store location but also by size. Both rent and total expense increase with the size of city, the relative rate for rent, however, being greater than for total expense, thus producing an increase in the amounts of rent paid when measured in this way.[1]

[1]How nearly the different measures of rent in relation to total expense agree as to the direction of change with size of city, is shown by the following coefficients of concurrent deviations.

COEFFICIENTS OF CONCURRENT DEVIATIONS OF MEASURES OF RENT PER $100 OF TOTAL EXPENSE FOR STORES BY SIZE OF CITY

Years	Store Groups	Coefficients of Concurrent Deviations		
		Arithmetic Means and Medians	Medians and First Quartiles	First and Third Quartiles
1918-19	I	+.52	+.90	+.81
1916-20	II	+.94	+.95	+.72

In Table XI, the 181 stores which reported for the five consecutive years are classified by the size of city in which they are located, for the purpose of showing the per cent increases or decreases of rent in relation to total expense. Over the entire period and from year to year, when all stores are combined, rents in relation to total expense decreased. Moreover, the same condition holds when the stores are classified according to location, although for one group, rent as a proportionate part of total expense was higher in 1918 than in 1917, and in two groups higher in 1920 than in 1919. When the condition for all of the stores in 1920 is compared with 1916, the rate of decrease is larger for the stores in the large than for those in the small cities. From year to year, however, no such regularity occurs.

TABLE XI

PER CENT CHANGES FROM YEAR TO YEAR IN RENT PER $100 OF TOTAL EXPENSE FOR STORES CLASSIFIED BY SIZE OF CITY

Size of City (in 000's)	Number of Stores	Per Cent Increases (+) or Decreases (−) in Rent per $100 of Total Expense							
		1916 to 1917	1916 to 1918	1916 to 1919	1916 to 1920	1916 to 1917	1917 to 1918	1918 to 1919	1919 to 1920
Average	181	− 6.2	−11.2	− 28.0	− 33.7	− 6.2	− 5.3	−18.9	− 8.0
Under 10	52	− 8.7	−19.8	− 29.2	− 28.3	− 8.7	−12.1	−11.7	+ 1.3
10 to 20	29	− 6.3	− 6.1	− 24.9	− 22.8	− 6.3	+ 0.2	−20.1	+ 2.9
20 to 40	27	− 9.4	−15.6	− 26.3	− 31.9	− 9.4	− 6.8	−12.7	− 7.7
40 to 120	37	−11.3	−18.9	− 31.1	− 33.6	−11.3	− 8.6	−15.0	− 3.7
120 & over	36	− 3.8	− 7.6	− 28.5	− 36.8	− 3.8	− 3.9	−22.7	−11.6

Bureau of Business Research,
Northwestern University.

In Table XII, rent is expressed as a proportionate part of total expense when the two groups of stores are classified according to both location and size. For the stores thus analyzed, rent decreases as the size of stores increases. To this general rule there is but a single exception when the arithmetic means are used, three exceptions when the medians and first quartiles are employed, and one when the third quartiles are used. All of the different measures are a unit in showing this tendency for the stores in Group I—the exceptions occur only in Group II. This tendency is based upon the averages of the stores for the combined years under consideration. If the individual years are treated separately, the same general tendency obtains. The conclusion holds, therefore, that rent in relation to total operating expense decreases as stores increase in size.

Table XII also shows that rent, as a proportionate part of total expense, is higher for stores of a given size located in large cities than for those of the same size located in small cities—small and large cities meaning, respectively, those with population under 40,000 and those with population of 40,000 and over. To this general rule there are no exceptions for the stores as classified. Moreover, when no consideration is given to location, the stores being classified according to size alone, rent becomes a proportionately smaller part of

TABLE XII

MEASURES AND COEFFICIENTS OF EXPENDITURES FOR RENT PER $100 OF TOTAL EXPENSE FOR RETAIL CLOTHING STORES CLASSIFIED BY SIZE AND LOCATION

Year	Size of City (in 000's)	Classified Total Net Sales (in 000's)	Number of Store-years	Rent per $100 of Total Expense							Coefficients Based on Quartiles	
				Arithmetic Mean			Median	Quartiles		Semi-Quartile Range	Dispersion	Skewness
				Amount	Per Cent Graphic 0 25 50 75 100 125 150 175	Per Cent Actual		First	Third			
Group I 1914, 1918, and 1919, Combined		Average	678	$11.46		100.0	$11.76	$8.70	$16.15	$3.73	.30	+.18
	Total	Under $40	215	14.66		126.4	15.31	9.89	18.50	4.31	.30	+.19
		$40 to $80	243	13.03		113.7	11.48	8.86	15.56	3.35	.27	+.16
		$80 to $160	161	12.17		106.8	10.84	7.98	15.14	3.94	.35	+.09
		$160 & over	59	9.80		88.8	10.86	6.46	15.00	4.77	.45	+.09
	Under 40	Average	513	10.82		94.4	11.03	8.33	15.11	3.39	.29	+.30
		Under $40	197	13.55		118.3	12.98	9.70	17.61	3.96	.29	+.19
		$40 to $80	197	11.71		98.9	10.76	8.48	14.14	2.83	.25	+.19
		$80 to $160	106	10.07		87.9	9.12	6.32	13.06	3.37	.55	+.15
		$160 & over	13	7.57		64.3	7.11	5.56	9.50	1.97	.26	+.21
	40 & over	Average	165	11.94		104.6	14.81	10.94	19.67	4.37	.59	+.11
		Under $40	18	21.79		190.1	20.67	15.75	30.80	8.68	.88	+.17
		$40 to $80	46	18.19		157.9	17.00	13.15	22.83	4.84	.27	+.21
		$80 to $160	55	15.13		131.0	14.11	10.77	18.50	3.87	.26	+.14
		$160 & over	46	9.77		86.3	12.91	8.50	17.50	4.50	.35	+.02
Group II 1914 to 1920, Combined		Average	905	12.83		100.0	11.73	8.80	15.71	3.71	.31	+.07
	Total	Under $40	114	13.68		109.7	14.08	11.56	17.00	2.72	.19	+.07
		$40 to $80	256	13.75		106.9	12.19	8.67	15.76	3.55	.29	+.007
		$80 to $160	314	12.04		93.8	10.79	7.98	13.14	2.58	.25	+.12
		$160 & over	221	12.86		100.1	11.06	8.29	13.95	2.83	.32	+.26
	Under 40	Average	540	10.16		80.3	10.75	7.51	14.33	3.41	.31	+.05
		Under $40	102	13.74		104.7	12.91	10.95	16.76	2.91	.21	-.02
		$40 to $80	309	11.14		88.8	11.22	8.09	14.61	3.21	.33	+.02
		$80 to $160	302	9.47		74.9	9.16	6.42	11.91	2.75	.30	+.008
		$160 & over	27	8.70		71.0	9.20	6.85	12.00	2.73	.29	+.02
	40 & over	Average	365	12.44		106.9	13.69	9.61	19.09	4.74	.33	+.14
		Under $40	12	18.70		148.5	15.75	13.62	33.00	9.69	.42	+.78
		$40 to $80	47	22.30		176.9	18.07	14.22	30.00	7.89	.36	+.44
		$80 to $160	112	15.60		123.3	14.97	11.85	19.89	4.17	.27	+.11
		$160 & over	194	12.83		101.4	11.57	8.46	15.88	4.08	.33	+.09

Bureau of Business Research, Northwestern University.

Averages

total expense as the stores increase in size. This condition differs from that shown in Table VII, where rent is measured in relation to net sales. It seems to show that the rates at which the other expenses increase with size of store are greater, on the whole, than the rate for rent. To which element or elements of expense this condition is due, the table does not show, although other reports of the Bureau answer the question.

In summarizing the part of this paper which deals with the tendencies of change of commercial rent in relation to sales and total expense, it may be concluded as follows: First, from 1914 to 1919 and from 1916 to 1920, respectively, for two groups of stores, rent in relation to sales and as a proportionate part of total expense, decreased. Second, in the combined years, 1914, 1918, and 1919, and 1916 to 1920, inclusive, and for each of the years considered, for both groups of stores, rent in relation to sales and as a proportionate part of total expense increases as the size of the city in which the stores are located increases. Third, for the combined years, 1914, 1918, and 1919 and for 1916 to 1920, inclusive, and for each of the years considered, rent in relation to total net sales and as a proportionate part of total expense decreases as stores increase in size when the stores are classified by location. When they are classified by size alone, rent in relation to sales neither increases nor decreases regularly as stores increase in size. When the amounts are measured as parts of total expense, however, they regularly decrease. Fourth, commercial rents in relation to sales and to total expense are relatively higher in stores of a given size located in large cities than for those of the same size located in small cities.

The above observations and conclusions relate solely to one field of retailing. Whether the same conditions obtain in other fields is not known because studies of this type have not been made. There is always a tendency to generalize for an entire industry on the basis of data drawn from a single field. This regrettable practice is not indulged in in this case, although it is believed that the uniformities which have been discovered in the clothing trade will tend to hold for the entire field of retailing. Without stressing this point, however, there is no hesitancy in concluding that, had more stores been considered and the distribution broadened, or another group chosen at random, the same general tendencies here depicted would have been repeated for this field.

III. *Commercial Rent in Its Relation to Profits*

A conclusive inductive study of rent in its relation to prices and profits, when these terms are taken in a strictly economic sense, will probably never be made. It is doubtful whether economic rent can ever be separated from commercial rent in sufficient instances and under conditions suitable for study, or whether pure profits can be isolated so that the causal relationship between rent and price can be demonstrated once and for all. I am making no pretentions of doing this in a study of the relationship of rent and profits in the retail clothing field. The rent data represent the actual amounts paid for this purpose under contractual arrangements when stores are rented, and an estimated rental when stores are owned. For both cases every care is taken to reduce to a common basis the items which are included in rent and to make the conditions comparable.

An analysis of the relation of commercial rents to profits requires that the results of store operations be set out in a profit-and-loss form. This was done for the individual stores preliminary to combining them into groups, and the same form is followed in presenting complete results for the store experience studied. Actual amounts of gross margin, total expense, net trading profit, and net profit are not shown, index or relative numbers in all cases being used. Moreover, the data refer to a single year, 1919. That is, a cross section of the trade for this year is presented. There is, however, little reason for believing that the relationships between competing units, in this or in any other field of trade which is highly competitive, are markedly different at one time from those at another. This statement, in the minds of some, may require proof. The only—but, it appears, adequate—evidence which is available to support it is contained in our own analyses. One has only to turn through the pages of the Bureau's published studies to observe the striking similarities which obtain for the different conditions of operation for the years 1914, 1918, and 1919—a pre-war, a war, and a post-war year.

The tendencies for commercial rent to vary under different conditions of store location and operation require that, in the analysis of the problem under consideration, data for stores of similar size and location shall be used. If the tendencies observed in the first part of this paper are fundamental—and they seem to be—to do otherwise would make the results of the analysis misleading and of doubtful value. Accordingly, two groups of stores have been selected for

study: first, 87 stores with average sales of $56,456 in 1919, all having sales between $40,000 to $80,000 in this year; and, second, a group of stores with average sales of $116,546, all having sales between $80,000 and $180,000 in 1919. The stores in these two groups are located in cities with population under 40,000. It would have been more satisfactory to have chosen stores located in cities in which the range of population was less. Sufficient data for this purpose, however, were not available. It is felt, however, that the rather widely varying sizes of the cities do not seriously disturb the identity of store location, because in each city there tends to be a business section or sections the value of which, for the purposes in question, does not depend so much upon the entire population as it does upon that in the immediate neighborhood and upon the severity of the competition for the sites available. That is, rentals are a function of city size primarily to the extent of the population contiguous to a particular district.

It would obviously be impossible in a study of the relation of commercial rents to profits to compare competing units in terms of the actual amounts of rents paid. These differ according to the floor space occupied, the nature of the building, the amount of competition for the site, the length of the contract, etc. Some relative measure must be used. Accordingly, it was decided to compare the operating conditions of stores when they are classified according to the amounts of rent per 100 square feet of floor space. Building space is purchased on this basis when leases are made or renewed, both parties to the contract bargaining in these terms.

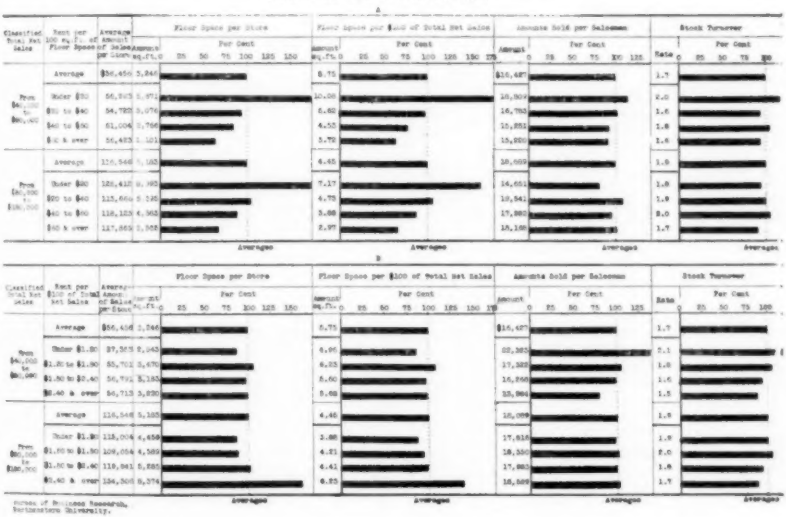
The amounts of commercial rent, however, enter primarily into the accounts of merchants in their relation to sales. Out of sales rentals must be paid. Accordingly, each step in operation for both groups of stores is studied when the stores are classified by the amounts of rent paid in terms of floor space and of sales, appropriate units being employed to measure the different operating conditions.

Before beginning the discussion of these conditions, however, it is necessary briefly to discuss the relationships between the amounts of commercial rent paid and the floor space used, the amounts sold per salesman, and the rapidity of stock turnover. From an analysis of this type, certain more or less definite tendencies are discovered, all of which have a direct bearing upon the subsequent discussion.

Table XIII shows the average amount of sales per store, the floor space per store, the floor space per $100 of sales, the amounts sold

per salesman per year, and the rates of stock turnover for the two groups of stores, classified, first, according to the amounts of rent paid per 100 square feet of floor space; and, second, according to the amounts paid per $100 of total net sales. When the two groups of stores are classified by the amounts of rent paid per unit of floor space, the amounts of floor space used per store and per $100 of total net sales decrease as rent increases. There is but one exception to this general rule. The amounts sold per salesman for one group of stores decrease as rent paid per unit of floor space increases; for the other, the tendency is uncertain. Moreover, there seems to be no unmistakable tendency for the rates of stock turnover to increase or decrease when the stores are classified in this manner. When, however, these same stores are classified according to the amounts of rent paid per $100 of total sales, somewhat different conditions obtain. The amounts of floor space per store, rather than decrease, increase. There is a single exception to this rule for the 87 stores; otherwise, the tendencies are uniform. Moreover, the amounts of floor space per $100 of total net sales increase with increasing rent paid per unit of sales. To this rule there is likewise

TABLE XIII



one exception. The amounts sold per salesman, for one group of stores, follow the order observed when the stores are classified according to rent in relation to floor space. For the other group, the direction of change is uncertain. Probably the most evident tendency exhibited in Table XIII is for rates of stock turnover for both groups of stores to decrease as the amounts of rent in relation to sales increase. That is, high rates of stock turnover are associated with low amounts of rent paid in relation to sales.[9]

Table XIII makes it clear that merchants, in the face of high rentals, restrict the absolute as well as the relative amounts of space purchased. It is doubtful, however, that in doing so they make any conscious comparison of the relation of rent paid to their actual or probable sales,[10] although it is patent that such a comparison should be made since rent must be paid out of sales. If sales on a given amount of floor space, when rents are high, are not larger than when they are low, such space is of doubtful value. This is more particularly true because when rents are high, so also are all of the other principal operating expenses.[11] In the face of high rentals, it is necessary either to operate on wider margins[12] or to secure a compensating advantage through more rapid stock turns. Stock turns rather than being higher under the handicap of high rentals, are actually lower. Moreover, in stores which pay high rentals either in terms of floor space or of sales, there seem to be no economies secured through larger sales per salesman. This condition operates as a disadvantage to the stores paying high rents and obviously decreases the amounts of profits secured.[13]

The remaining part of this section of the paper has to do with the amounts of gross margins, operating expenses, net trading profits, and net profits, measured in different ways, for two groups of stores

[9]The Pearsonian coefficient of correlation between amounts of rent per $100 of total net sales and rates of stock turnover for the 150 stores in the two groups is -.22, P. E. .053.

[10]The Pearsonian coefficient of correlation between rents in units of floor space and in terms of sales is +.66, P. E. .033. That is, it is positive and high.

[11]Wages and salaries and expenses for advertising when measured in sales increase with increasing rents expressed in sales. The Pearsonian coefficient of correlation between rents and wages and salaries, both measured in sales, for the 150 stores is +.28, P. E. .051. For rent and advertising, similarly expressed, it is +.21 P. E. .053.

[12]Margins, under the conditions established in the analysis, are discussed below, p. 82.

[13]A discussion of the relationship between the amounts sold per salesman and net profits is contained in Bulletin No. 5, Series II, of the Bureau's studies.

paying different amounts of rent in relation to floor space and sales. The records of stores of essentially uniform size and similar location have been selected for this purpose, because of the different tendencies by which these items are affected for stores of varying size. Briefly, Table XIV shows that, as these stores increase in size, gross margin and total operating expense in relation to sales increase, while net trading profit and net profit measured in terms of sales decrease. With these tendencies present for stores of varying size, it is impossible to measure satisfactorily the association between the different elements of operation and the amount paid for rent without choosing stores in which size and location are not disturbing factors.

TABLE XIV

INDEX NUMBERS OF RATIOS OF OPERATION FOR STORES CLASSIFIED BY SIZE OF CITY AND SIZE OF STORE, 1919

Size of City (in 000's)	Classified Total Net Sales (in 000's)	Number of Stores	Index Numbers of Ratios of Operation							
			1 Gross Margin per $100 of Total Net Sales		2 Total Expense per $100 of Total Net Sales		3 Net Trading Profit per $100 of Total Net Sales		4 Net Profit per $100 of Total Net Sales	
			Actual	Graphic	Actual	Graphic	Actual	Graphic	Actual	Graphic
Total	Average	265	100.0		100.0		100.0		100.0	
	Under $40	51	89.9		90.0		107.0		102.1	
	$40 to $80	101	93.3		95.0		107.7		105.6	
	$80 to $120	69	98.6		93.3		107.9		104.4	
	$120 & over	42	104.0		111.0		91.9		94.5	
Under 40	$40 to $80	67	93.5		92.7		112.3		110.3	
	$80 to $120	63	98.7		84.7		123.2		116.7	

Graphic: 0 25 50 75 100 — Average

Bureau of Business Research, Northwestern University.

The writer is fully aware of the fact that even for stores of essentially the same size and location there are factors other than the amounts of rent paid which help to determine operating expenses and profits. That is, the present analysis does not establish the fact that high or low rents are the cause of low or high profits, or vice versa. The most that it does is to measure the association between these factors for a given store experience and to suggest to merchants and others the fact that commercial rents have an intimate relationship to costs and profits in business.

In Tables XV to XVIII, inclusive, the amounts of gross margins, total expenses, net trading profits, and net profits, measured in suitable units, are shown for two groups of stores, classified, first, according to amounts of rent paid per unit of floor space; and, second, according to amounts of rent paid per unit of sales. An analysis of the detail of these tables reveals some interesting facts. Table XIX summarizes the net effects of the processes of operation on the profits secured.

The gross margin of a store is the difference between the amount of sales and the cost of the merchandise sold. Out of this amount, operating expenses must be paid and profit or loss, as the case may be, is secured. In Table XV the gross margins, cost of merchandise sold, total expense, and net profit, each measured in terms of sales, are shown for two groups of stores classified, according to rental payments, first, per unit of floor space; and, second, per unit of sales. For the 87 stores, the amounts of gross margins in terms of sales, and of cost of merchandise sold, vary inversely with the amounts of rent paid in relation to floor space. A similar condition obtains for this group of stores when classified according to the rental payments in terms of sales. On the other hand, for the 63 larger stores, gross margins in terms of these different units vary directly with the amounts of rent paid when measured in units of floor space and sales. That is, for the two groups, the relationship between the size of gross margins and the amounts of rent paid is inverse in one case and direct in the other. The tendencies are contradictory. In

TABLE XV

INDEX NUMBERS OF GROSS MARGIN PER RETAIL CLOTHING STORE PAYING CLASSIFIED AMOUNTS OF RENT IN 1919

A

Classified Total Net Sales	Rent per 100 sq. ft. of Floor Space	Number of Stores	Index Numbers of Gross Margin: 1 Per $100 of Total Net Sales — Actual	1 Per $100 of Total Net Sales — Graphic (0 25 50 75 100)	2 Per $100 of Cost of Merchandise Sold — Actual	2 Per $100 of Cost of Merchandise Sold — Graphic (0 25 50 75 100)	3 Per $100 of Total Expense — Actual	3 Per $100 of Total Expense — Graphic (0 25 50 75 100)	4 Per $100 of Net Profit — Actual	4 Per $100 of Net Profit — Graphic (0 25 50 75 100 125)
	Average	87	100.0		100.0		100.0		100.0	
From $40,000 to $80,000	Under $30	13	99.0		98.4		124.9		95.8	
	$30 to $40	43	103.0		104.4		101.8		97.5	
	$40 to $50	17	97.1		95.8		92.8		105.6	
	$50 & over	14	95.9		94.1		86.9		119.9	
	Average	63	100.0		100.0		100.0		100.0	
From $80,000 to $180,000	Under $30	3	98.4		96.0		97.7		98.1	
	$30 to $40	30	96.5		94.8		105.6		97.6	
	$40 to $50	20	100.9		101.4		98.8		99.0	
	$50 & over	8	112.8		109.0		95.4		115.8	
				Averages		Averages		Averages		Averages

B

Classified Total Net Sales	Rent per $100 of Total Net Sales	Number of Stores	Index Numbers of Gross Margin: 5 Per $100 of Total Net Sales — Actual	5 Per $100 of Total Net Sales — Graphic (0 25 50 75 100)	6 Per $100 of Cost of Merchandise Sold — Actual	6 Per $100 of Cost of Merchandise Sold — Graphic (0 25 50 75 100)	7 Per $100 of Total Expense — Actual	7 Per $100 of Total Expense — Graphic (0 25 50 75 100)	8 Per $100 of Net Profit — Actual	8 Per $100 of Net Profit — Graphic (0 25 50 75 100 125)
	Average	87	100.0		100.0		100.0		100.0	
From $40,000 to $80,000	Under $1.20	15	92.6		90.6		116.0		86.7	
	$1.20 to $1.60	32	108.1		112.1		115.5		92.9	
	$1.60 to $2.40	22	99.3		99.0		99.4		101.9	
	$2.40 & over	20	97.5		96.4		99.8		100.0	
	Average	63	100.0		100.0		100.0		100.0	
From $80,000 to $180,000	Under $1.20	20	93.4		90.5		110.5		91.0	
	$1.20 to $1.60	21	97.4		96.2		101.5		99.6	
	$1.60 to $2.40	14	107.4		111.5		99.4		105.5	
	$2.40 & over	8	108.8		112.6		84.1		112.6	
				Averages		Averages		Averages		Averages

Bureau of Business Research, Northwestern University

both groups of stores, however, if margins are high when rents in terms of floor space are high, or vice versa, they are also high when rents in terms of sales are high, or vice versa.

Gross margins, however, are of primary interest in their relation to the other phases of store operation. For stores paying different relative rentals, how are they related to operating expenses and profits? Answers to these questions for both groups of stores are found in Tables XVI to XIX, inclusive.

TABLE XVI

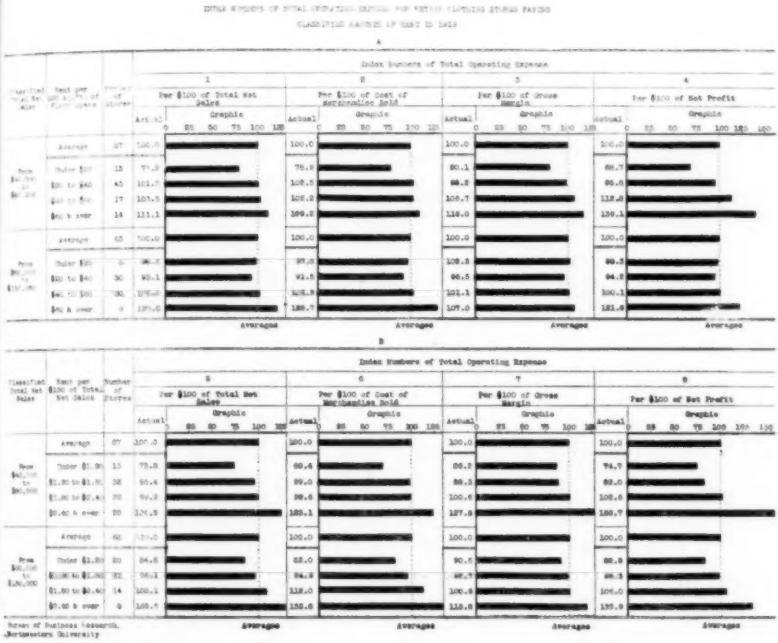


Table XVI shows the amounts of total operating expense measured in different ways for stores classified according to their rentals in terms of floor space and sales. Under both classifications, stores which pay high rentals have high total operating expense in terms of sales, of cost of merchandise sold, of gross margins, and of net profits. The increase in expenses in relation to sales in passing from low to high rental stores, however, is generally smaller for the stores in which gross margins vary directly with rent than it is for those in which they vary inversely. Even for the group in which margins

and expenses move together, the rate of increase in expenses is greater than it is for margins. For the stores in the other group—in view of the relative increase in expenses—no reasons are apparent why margins do not increase. Moreover, when the operations of all of the stores are considered, it appears that no fundamental principle is followed in determining gross margins. For one group of stores, in the face of increasing rentals and total expense, they relatively decrease. For another group, while the margins followed the tendencies shown by expenses, the relative amounts bear little relation to them. Moreover, the differences between the amounts of total expense for the low and the high rental stores are greater when the stores are classified by the relation of rent to floor space than when classified by the relation of rent to sales. That is, amounts of expense, for stores paying different rentals in relation to space, do not forecast what the expenses for the same stores will be when they are classified by rents paid in relation to sales. For merchandising success, the relation between rents and sales is far more vital than the relation between rents and floor space. This fundamental fact seems to have been ignored by the merchants whose records are under review.

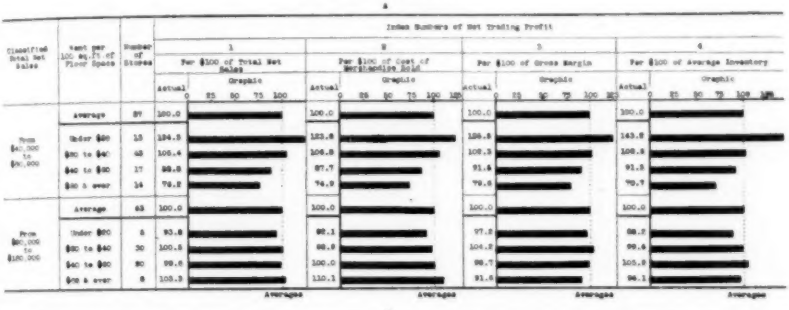
The difference between gross margins and operating expenses constitutes net trading profit. The relative amounts of such profits for the stores, the gross margins and expenses of which are being considered, are contained in Table XVII. These amounts, for the stores in which gross margins vary inversely with rent in relation to floor space and sales, obviously follow the same general tendency. To this rule there are no exceptions for the different measures of net trading profit for the stores classified by the amounts of rent in relation to floor space, and only a single exception for each of the measures when the stores are classified by the amounts of rent in relation to sales. In general, net trading profits measured in sales, in cost of merchandise sold, in gross margins, and in average inventories at cost are lower for stores paying high than for those paying low rentals. For the group of stores in which gross margins vary directly with rentals when measured in floor space, net trading profits tend to increase as rentals increase. There are clear exceptions to this rule when the stores are classified by the amounts of rent expressed in this form. When they are classified by the amounts of rent in relation to sales, the amounts clearly decrease. It is obviously this latter basis of classification which has the greater merchandising signifi-

cance. When all the evidence is considered cumulatively, it may be concluded that net trading profits vary inversely with the amounts of rent paid when measured in terms of sales. This means that sufficient sales were not secured by the stores on the high rental space to give them profits equal to those occupying less valuable sites. Moreover, the comparatively high gross margins fixed by one group of stores were not sufficient to place them in as satisfactory a position as their rivals paying less rent and operating with smaller expenses.

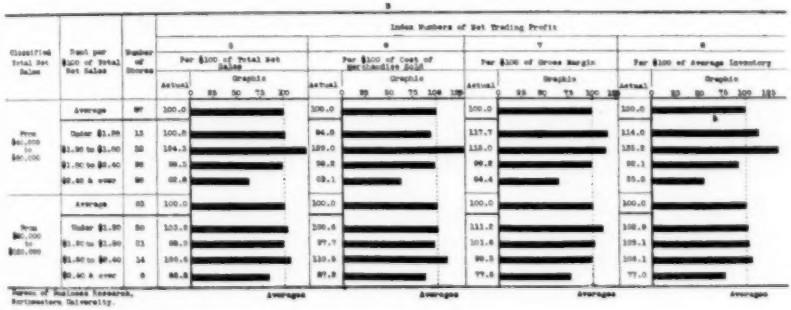
TABLE XVII

INDEX NUMBERS OF NET TRADING PROFIT FOR RETAIL CLOTHING STORES PAYING CLASSIFIED AMOUNTS OF RENT IN 1918

A



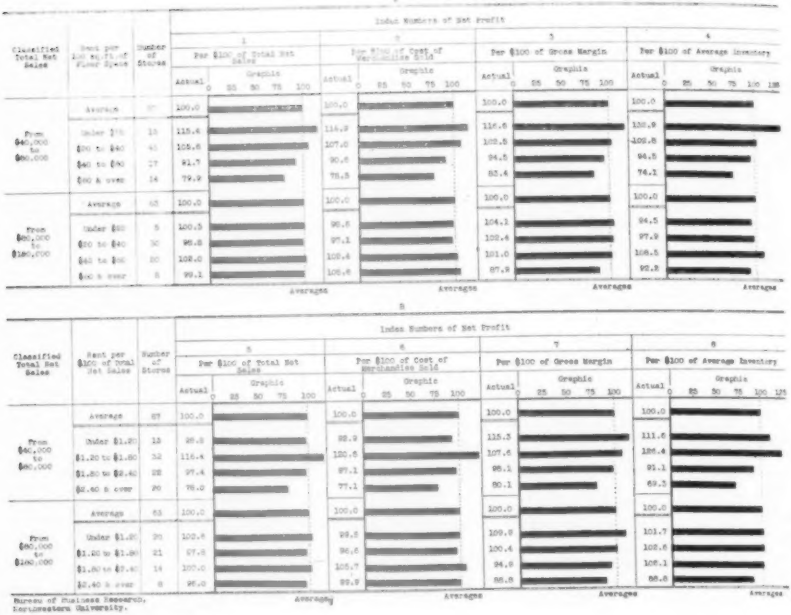
B



Bureau of Business Research, Northwestern University.

But Table XVII does not tell the whole story. To determine net profit the net miscellaneous income or charges must be added to or deducted from net trading profit. Table XVIII shows the net profits of these two groups of stores paying different rentals as measured in preceding tables. What is its meaning? For one group of stores, net profits expressed in units of sales, of cost of merchandise sold, of gross margins, and of average inventories at cost vary inversely with the amounts of rent paid when measured in terms of floor space and of sales. For the other, the direction of change is uncertain

TABLE XVIII



when rents are measured in terms of floor space, but when measured in units of sales the amounts decrease as rentals increase, as they do for the other group. Summarizing the presentations, it may be concluded that the stores which pay high rentals do not, on the whole, secure profits equal to those which pay low rentals.

Table XIX is designed to summarize the different conditions of operation in the two groups of stores. Because of the fact that rents are more satisfactorily measured in sales than in floor space, only part "B" of the table, which relates to this measurement, will be discussed. The other basis of comparison, part "A," however, shows the same general relationship between rents and profits.

Between the low and high rental stores, rent in terms of sales increased for one group by 249.5 and for the other by 248.4 per cent. In the first, gross margins in terms of sales were 13.8, and in the second, 15.9 per cent higher in the high than in the low rental stores. Corresponding to these per cent increases in rent and gross margins

went increases of 68.7 and 51.9 per cent, respectively, in operating expenses in terms of sales. The effects of these combined changes were to reduce net trading profits in terms of sales, in the first case by 37.7, and, in the second, by 19.3 per cent. That is, 100 per cent increase in the rent paid per unit of sales is associated with a decrease in net trading profit, per unit of sales, of 15 per cent for one group of stores, and 8 per cent for the other. Moreover, for both groups the net profits suffered a decrease. In the first group of stores, the per cent reductions between those stores paying the highest and those paying the lowest amounts of rent in relation to sales are as follows: in terms or sales, 21.0; in terms of cost of merchandise sold, 17.0; per unit of gross margin, 30.6; per unit of investment (average inventories at cost) 37.9. That is, 100 per cent increase

Table XIX

PER CENT CHANGES IN RATIOS OF OPERATION WITH INCREASING EXPENDITURES FOR RENT

A

Classified Total Net Sales	Rent per 100 sq.ft. of Floor Space			Per Cent Changes in Ratios of Operation from Amounts Characterizing Base Stores						
	Groups	Average Amounts	Per Cent Changes	Gross Margin per $100 of Total Net Sales	Total Expense per $100 of Total Net Sales	Net Trading Profit per $100 of Total Net Sales	Net Profit			
							Per $100 of Total Net Sales	Per $100 of Cost of Merchandise Sold	Per $100 of Gross Margin	Per $100 of Average Inventory
From $40,000 to $80,000	Under $20	$11.90	Base	Base	Base	Base	Base	Base	Base	Base
	$20 to $40	29.23	+145.6	+ 4.1	+27.7	−15.2	− 8.5	− 6.8	−12.1	−12.7
	$40 to $60	47.33	+297.7	− 1.9	+30.6	−28.5	−20.5	−21.1	−18.9	−18.9
	$60 & over	83.05	+597.9	− 3.2	+40.2	−36.6	−30.7	−31.7	−28.5	−44.3
From $80,000 to $120,000	Under $20	13.94	Base	Base	Base	Base	Base	Base	Base	Base
	$20 to $40	29.90	+114.5	+ 6.1	− 5.6	+ 7.2	− 1.5	− 1.5	− 1.6	+ 3.7
	$40 to $60	47.84	+243.2	+ 5.7	+ 3.5	+ 6.2	+ 1.6	+ 3.8	− 2.9	+14.9
	$60 & over	86.29	+519.0	+17.0	+22.5	+10.2	− 1.2	+ 7.1	−15.6	− 5.4

B

Classified Total Net Sales	Rent per $100 of Total Net Sales			Per Cent Changes in Ratios of Operation from Amounts Characterizing Base Stores						
	Groups	Average Amounts	Per Cent Changes	Gross Margin per $100 of Total Net Sales	Total Expense per $100 of Total Net Sales	Net Trading Profit per $100 of Total Net Sales	Net Profit			
							Per $100 of Total Net Sales	Per $100 of Cost of Merchandise Sold	Per $100 of Gross Margin	Per $100 of Average Inventory
From $40,000 to $80,000	Under $1.20	$0.93	Base	Base	Base	Base	Base	Base	Base	Base
	$1.20 to $1.80	1.40	+ 50.5	+26.2	+29.3	+25.3	+17.8	+29.9	− 6.7	+13.2
	$1.80 to $2.40	2.03	+118.3	+16.0	+35.5	− 2.3	− 1.4	+ 4.6	−14.9	−18.4
	$2.40 & over	3.25	+249.5	+13.8	+68.7	−37.7	−21.0	−17.0	−30.6	−37.9
From $80,000 to $120,000	Under $1.20	0.93	Base	Base	Base	Base	Base	Base	Base	Base
	$1.20 to $1.80	1.44	+ 54.8	+ 4.3	+13.6	− 4.8	− 4.6	− 2.9	− 9.5	+ 0.9
	$1.80 to $2.40	2.00	+115.1	+15.0	+27.7	+ 2.6	− 0.6	+ 6.2	−12.6	+ 0.5
	$2.40 & over	3.24	+248.4	+15.9	+51.9	−19.3	− 6.4	+ 0.5	−19.2	−12.4

Bureau of Business Research,
Northwestern University

in the amount of rent paid per unit of sales is associated, respectively, with 8.0, 7.0, 12.0, and 15.0 per cent decreases in net profits as measured by these different methods. For the second group, the corresponding reductions are as follows: 6.4, 0.5,[14] 19.2, and 12.4. In terms of a 100 per cent increase in rent in relation to sales, the respective decreases are 3.0, 0.2,[14] 8.0, and 5.0 per cent.[15]

Such are the conclusions which are reached, for the store records studied, respecting the association between rentals and the different operating conditions from margins and expenses to net trading profits and net profits.

What is the significance of these findings? The answer to this question lies, first, in the value of the statistical data and the conclusions to which they point; and, second, in an explanation of the conditions accounting for them. The data are satisfactory for the experience covered. Notwithstanding the fact that they refer to but a single year and relatively few stores, it may safely be concluded, it is felt, that something more than chance relationships between the different phases of operation in retail merchandising in this field has been discovered. The stores are located in different cities; they are operated under inferior and superior management, and according to dissimilar merchandising practices in fixing margins and controlling expenses. Nevertheless, surprisingly uniform and persistent tendencies have been discovered for profits to decrease as rentals increase. The association is clear, but a causal connection between high or low rents and low or high profits or vice versa has not been proved. It can not be argued from this presentation that high rents are the *cause* of low profits. They are associated, but which is *cause* and which is *effect* has not been shown. Neither has it been demon-

[14] Increase.

[15] Tests of the uniformity in the direction of change for the different measures of net profits, for stores classified according to their rental payments in terms of sales, are found in the following coefficients of concurrent deviations:

Year	Coefficients of Concurrent Deviations between Net Profits					
	On Sales and on Cost of Merchandise Sold	On Sales and on Gross Margin	On Sales and on Average Inventory at cost	On Cost of Merchandise sold and on Gross Margin	On Cost of Merchandise sold and on Average Inventory at cost	On Gross Margin and on Average Inventory at cost
1919	+.58	+.91	+.71	+.0	+.41	+.71

strated that there are no other *causes* operating simultaneously to produce high or low profits. Obviously there are many. A much more detailed study and a more elaborate method of analysis would be necessary to resolve the problem into its varying factors and to measure the contributing effect of each. The Bureau has in mind at a later date, and on the basis of more complete data, to attempt such an analysis.

An explanation for the association which has been discovered may be found, in part at least, in the conditions which determine the amounts of rent which are paid. In the first place, merchants, on the whole, have inaccurate knowledge of the value of space. They are loath to change locations in the face of increasing rentals,[11] and the bargaining basis between competing users of space is relatively uncertain. Moreover, they are at a disadvantage in competition with owners of space, and have only limited control over changes in rents and other major expenses. They cannot automatically adjust either their prices or their sales to cover increased costs. That is, competition is neither perfect nor, in many instances, intelligent—merchandising misfits being found in this as in other fields of industry and trade. So far as is seen, there is no corrective for this condition unless it is to be found in education and in business research. Even under the most perfect conditions for which we may dare to hope, economic friction and loss can probably never be fully removed. But this most obvious fact is no excuse for things as they are. Is there not a mutual obligation between those who are conducting research and those conducting business—an obligation to determine the principles of business, and an obligation to apply and be guided by them?

[11] As indicative of this fact, the following experience for the stores studied is interesting.

NUMBER OF STORES ACCORDING TO SIZE WHICH HAVE OCCUPIED PRESENT BUILDINGS DIFFERENT YEARS, CLASSIFIED BY PERIOD IN BUSINESS AS OWNED OR PARTLY OWNED BY PRESENT PROPRIETOR

Years in Business as Owned or Partly Owned by Present Proprietor	Sales from $40,000 to $80,000 in 1919						Sales from $80,000 to $180,000 in 1919					
	Total	Under 5	5 to 10	10 to 15	15 to 20	20 & over	Total	Under 5	5 to 10	10 to 15	15 to 20	20 & over
Total	87	18	22	16	12	19	63	9	9	18	7	20
Under 5	10	10					3	3				
5 to 10	17	2	15				6	1	5			
10 to 15	20	2	5	13			12	1	2	9		
15 to 20	15	4	1	2	8		13	3		3	7	
20 and over	25		1	1	4	19	29	1	2	6		20

LOCAL FACTORS IN CONNECTION WITH LABOR TURNOVER

By Anna Bezanson

The University of Pennsylvania

The discussion of this paper considers the records of labor turnover in Philadelphia plants during 1921 and 1922. The group covers widely varied industries including textiles, metal manufacture of various kinds from small machine parts to ship construction, chemicals, storage batteries, public utilities, and one retail establishment. The firms vary in size from those with a pay roll of less than 500 employees to one plant with 20,000. The concerns are located in different areas of the city proper and near-by suburbs.

During the year 1921 production conditions varied widely, some firms maintaining a fairly constant working force, while others reduced their forces by heavy intermittent lay-offs; several plants at the same time were increasing rapidly. During 1922 there was a gradual building up of forces. On the whole the increase in employees on the pay roll was more rapid in the smaller firms than in the larger establishments. The following table shows the pay roll changes by plants.

TABLE I

Index of Number Employed

Small Firms

1921

Base—January, 1922

Month	FIRMS										Total
	A	B	C	D	E	F	G	H	I		
January	121.1	171.8	154.3		109.9						
February	115.0	167.8	140.1		107.8						
March	113.8	167.8	130.9		109.0						
April	112.5	156.3	95.7		105.4						
May	111.0	136.2	68.4		99.4						
June	108.5	132.2	86.9		100.9						
July	106.5	113.2	82.6		90.4						
August	105.0	105.2	83.7		97.9						
September	103.0	97.1	87.2		104.5						
October	102.5	97.1	96.1		113.9						
November	103.0	98.9	97.2		105.4	93.2	106.3	73.7			
December	102.8	99.4	99.3		97.9	87.8	103.7		105.3		

INDEX OF NUMBER EMPLOYED

Small Firms

1922 Base—January, 1922

Month	FIRMS										Total
	A	B	C	D	E	F	G	H	I		
January	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0
February	96.7	100.0	98.9	102.8	101.2	109.6	95.4	122.6	101.4		101.3
March	96.2	104.0	99.3	108.1	101.5	105.7	90.2	154.1	102.8		102.2
April	95.0	105.2	103.2	108.4	110.8	102.3	91.5	136.8	101.4		102.4
May	93.0	105.7	111.7	115.8	131.0	102.3	90.7	145.1	115.1		108.2
June	92.2	107.5	113.1	129.9	127.1	103.1	88.5	143.6	123.5		110.1
July	93.0	106.9	121.6	134.2	124.1	106.5	87.6	163.9	118.8		111.8
August	99.5	105.7	135.5	134.2	135.5	104.9	89.9	198.5	118.2		117.2
September	97.7	104.0	134.0	149.6	141.6	103.9	98.5	204.5	114.6		120.0
October	93.0	99.4	145.7	161.3	146.7	97.4	108.5	199.2	114.8		123.4
November	96.7					98.4		241.4			
December											

TABLE I

INDEX OF NUMBER EMPLOYED

Large Firms

1921 Base—January, 1922

Month	FIRMS										Total
	J	K	L	M	N	O	P	Q	R	S	
January	109.8	71.7	97.2	342.8	103.0		190.5			32.7	
February	107.2	80.3	93.7	334.4	124.1		189.4			60.7	
March	106.2	79.4	94.3	324.7	122.8		176.4			70.1	
April	104.6	82.3	110.0	303.8	122.7		171.7			80.3	
May	102.6	82.9	117.9	279.8	110.0		166.3			89.2	
June	101.1	85.4	115.4	264.9	91.6		157.9			98.7	
July	102.6	88.2	124.6	237.6	85.1		147.4			98.1	
August	103.0	90.9	120.8	170.7	89.2		133.1			108.2	
September	102.7	93.3	115.1	148.4	93.8		113.0			117.8	
October	102.0	96.1	110.2	128.1	105.5	83.9	105.4	104.8		124.2	
November	101.6	95.7	105.5	111.3	117.8	86.8	103.2			124.7	
December	101.2	98.3	102.8	100.1	107.8	97.4	103.2			119.0	

INDEX OF NUMBER EMPLOYED

Large Firms

1922 Base—January, 1922

Month	FIRMS										Total
	J	K	L	M	N	O	P	Q	R	S	
January	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
February	97.6	97.2	110.6	97.8	100.3	100.0	95.1	97.9	97.8	100.8	99.1
March	97.1	101.4	122.0	89.1	101.1	135.9	90.5	96.6	95.1	91.2	98.0
April	96.0	97.8	132.9	84.3	122.8	169.6	91.4	94.5	93.1	84.6	98.3
May	96.3	101.8	141.3	80.9	113.9	189.7	98.8	93.8	93.3	69.6	98.9
June	97.7	104.5	144.6	78.3	118.9	221.2	102.0	95.1	93.9	69.6	100.5
July	101.1	105.9	146.9	75.6	114.1	240.7	104.9	93.8	94.2	79.3	101.5
August	103.9	105.6	154.2	73.0	103.3	253.1	98.2	98.8	95.1	83.8	102.2
September	107.0	104.9	149.8	70.1	102.4	209.2	97.4	100.5	95.6	89.2	101.4
October	111.6	105.8	154.7	69.8	110.7	196.0	102.8	106.8	95.6	87.5	104.5
November									95.6		
December											

With these preliminary remarks concerning general conditions, let us turn to the two questions which this paper is meant to cover. First, what are the indications of similar tendencies in the direction of turnover in the several plants? Second, what causes affected this similarity of movement?

With the difference in the number of employees involved in production, no conclusions can be formed until lay-offs are subtracted from the total exits. When one considers turnover less lay-offs in 1921, the year may be divided, for all the plants except the chemicals, into two parts of unequal length. During the period from January to April and May, the general tendency of turnover was upward; from June until the end of the year there was a uniform downward movement. The year 1922 is strikingly different by reason of the high rates of turnover, except in the larger textile plants. Considering the year from the point of view of direction, we find a general upward movement until June and July, followed by a drop during the two summer months. Toward fall there was a time of excessive shifting until the market became easier in October, when there was a corresponding slackness in turnover.

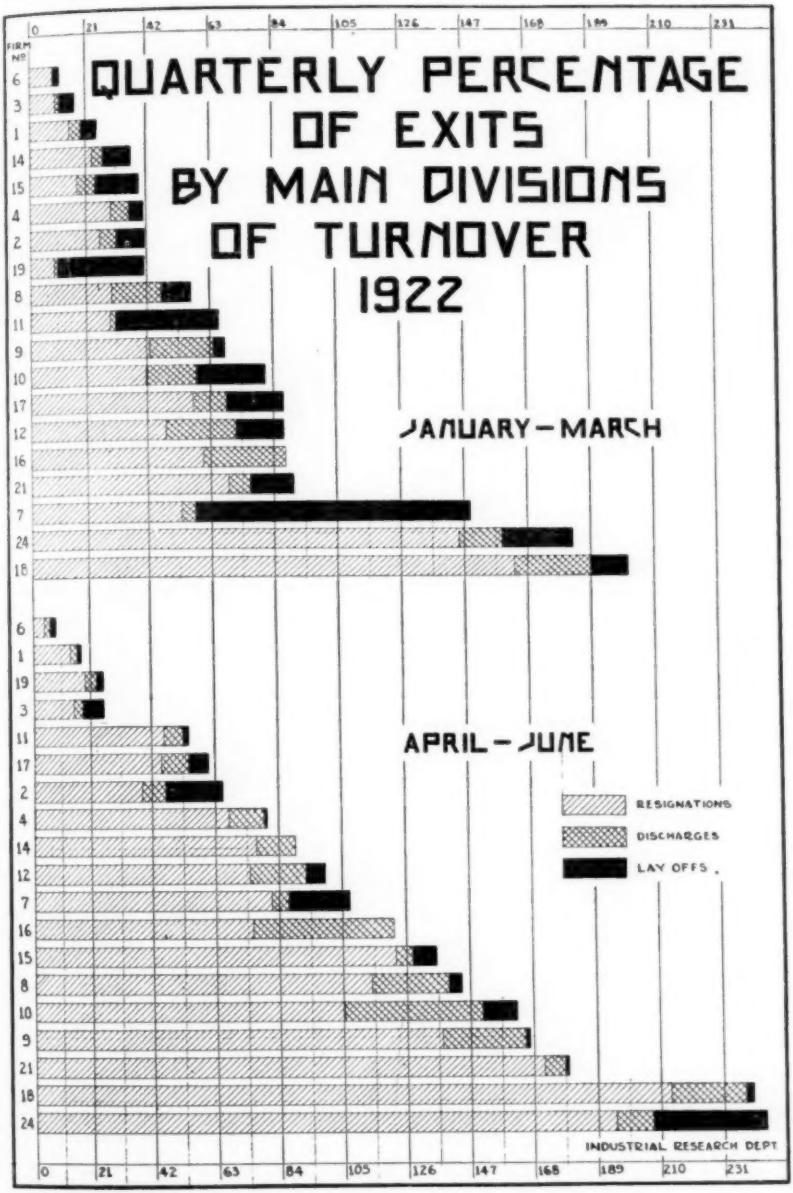
While turnover in the two years may be said to have moved in similar directions in the first half of each year, the last half of 1922 differs from the last half of 1921, not only in height of turnover, but also in character of the monthly deviations.

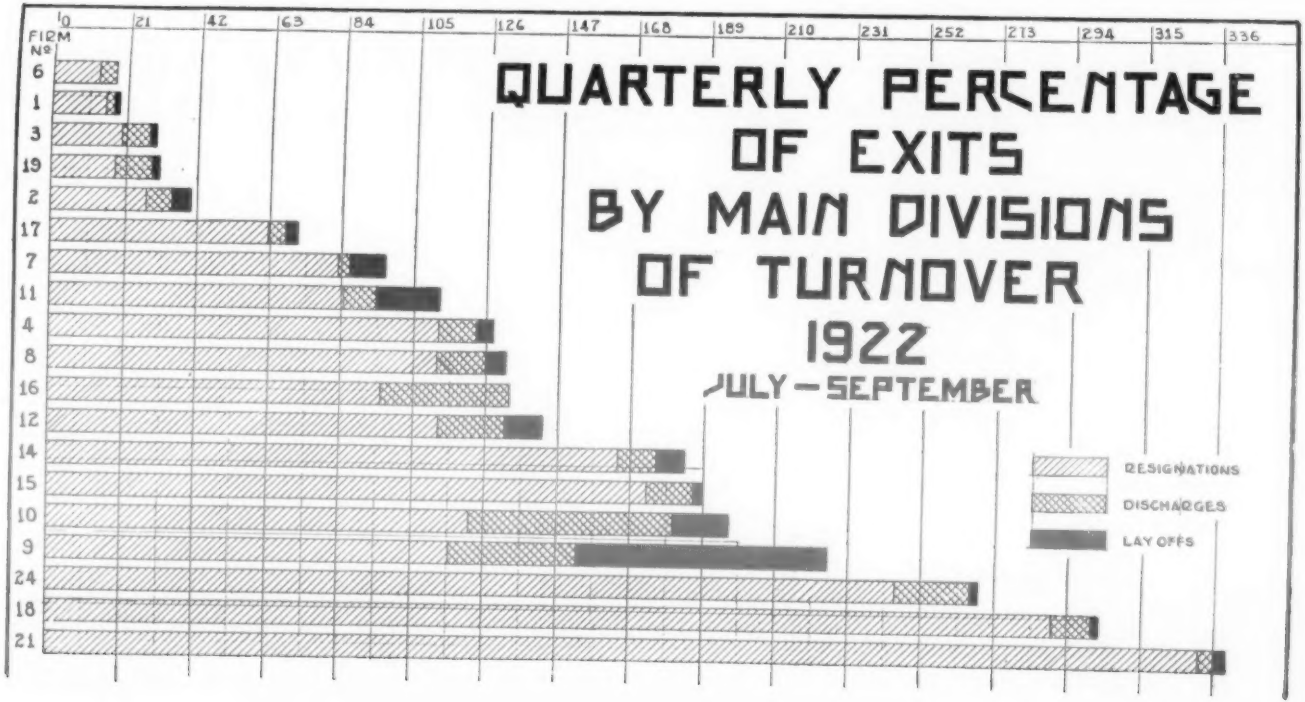
The chemical plants which did not conform to this general trend did have a correspondence of movement within the group. The high point of turnover in 1921 was in the summer months. In 1922, the chemical group followed more nearly the tendency already discussed for the other plants.

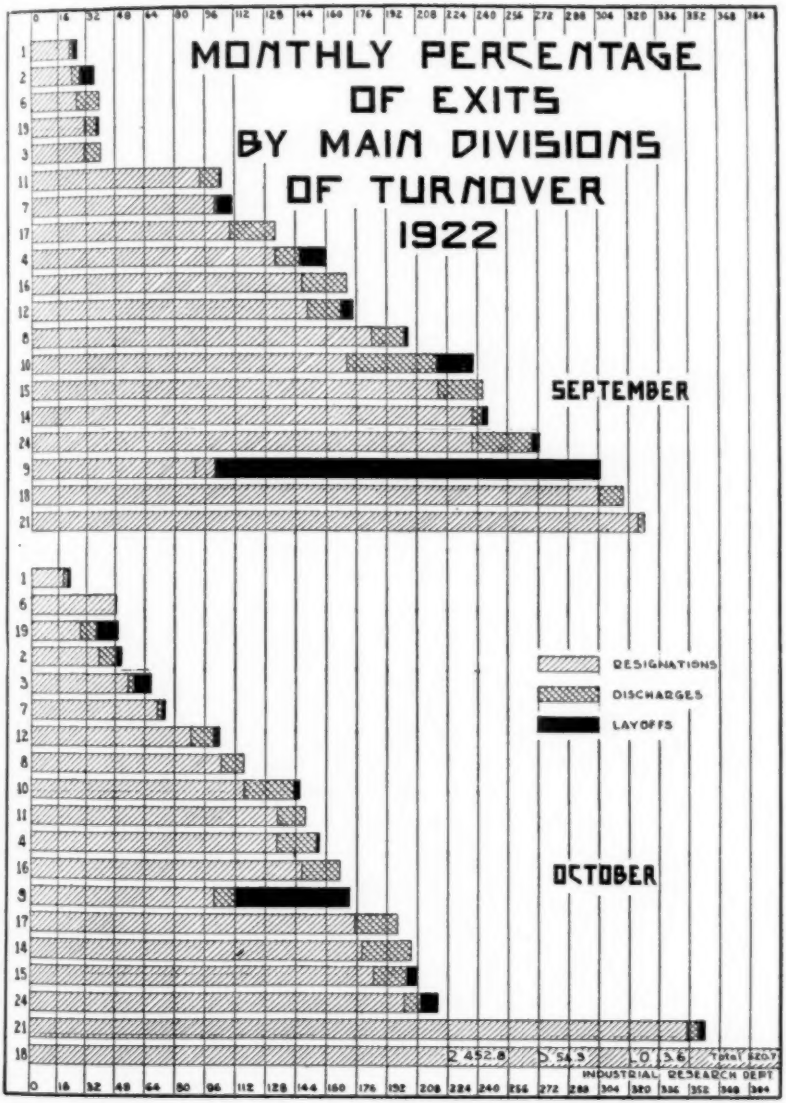
The shift in the amount of turnover during the year 1922 is shown clearly in the cross-hatched charts of turnover by resignations, discharges, and lay-offs. The lengthening of all the bars to the right indicates instability among the employees.The September chart shows the maximum turnover for the year. October shows a return to the rates of earlier months.

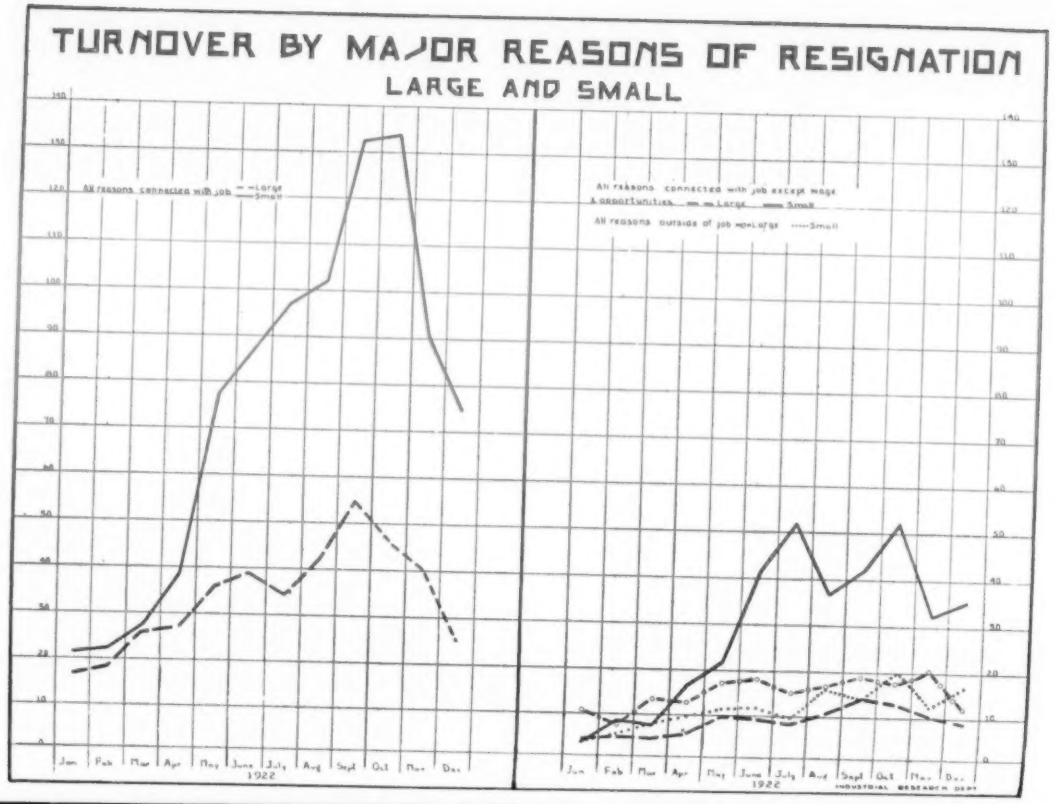
Despite the great difference in production conditions, management policy, and type of product manufactured, our problem is, how to account for the similarity in turnover trend which would seem to indicate common factors affecting all plants.

Since turnover was decreasing in 1921 and increasing rapidly throughout 1922, it might be claimed that the similarity of movement in 1921 meant merely that there was no opportunity to shift, while in 1922 the correspondence was due primarily to the fact that all curves were rising. For the year 1921 there was not greater opportunity

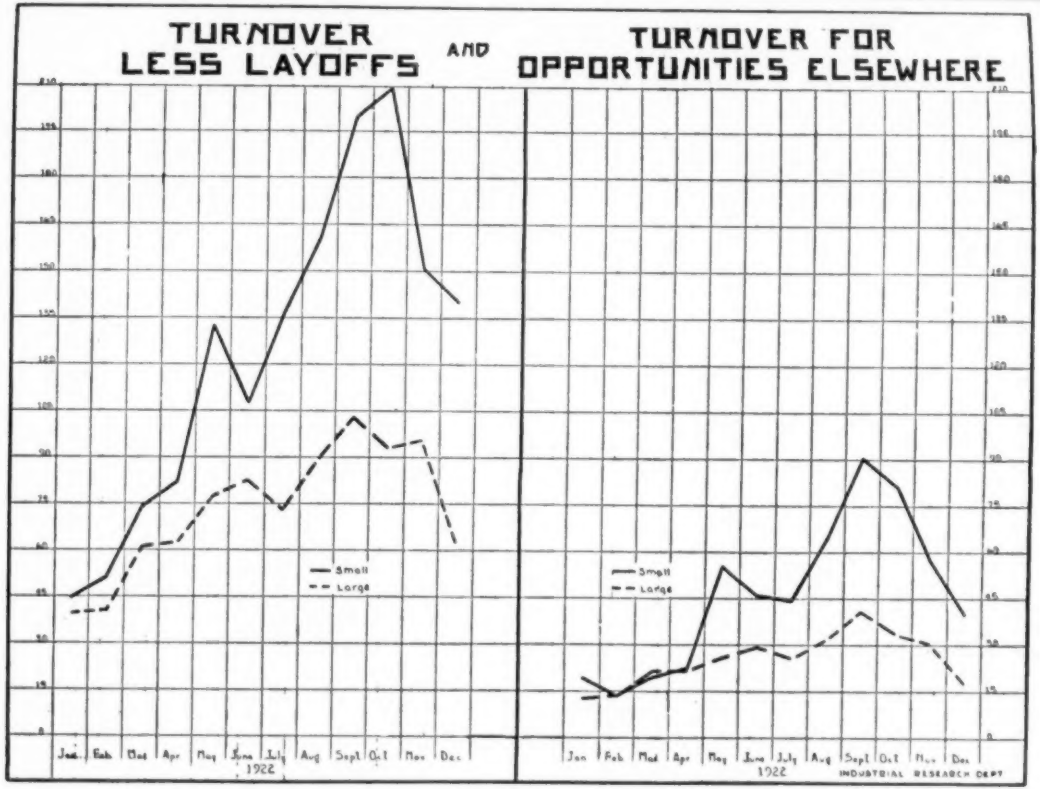

QUARTERLY PERCENTAGE OF EXITS BY MAIN DIVISIONS OF TURNOVER 1922
JANUARY – MARCH
APRIL – JUNE
RESIGNATIONS
DISCHARGES
LAY OFFS
INDUSTRIAL RESEARCH DEPT
FIRM NO
0
21
42
63
84
105
126
147
168
189
210
231


FIRM Nº
0
21
42
63
84
105
126
147
168
189
210
231
252
273
294
315
336
6
1
3
19
2
17
7
11
4
8
16
12
14
15
10
9
24
18
21
QUARTERLY PERCENTAGE OF EXITS BY MAIN DIVISIONS OF TURNOVER
1922
JULY – SEPTEMBER
RESIGNATIONS
DISCHARGES
LAY OFFS


MONTHLY PERCENTAGE
OF EXITS
BY MAIN DIVISIONS
OF TURNOVER
1922
SEPTEMBER
OCTOBER
RESIGNATIONS
DISCHARGES
LAYOFFS
INDUSTRIAL RESEARCH DEPT


TURNOVER BY MAJOR REASONS OF RESIGNATION
LARGE AND SMALL
All reasons connected with job — Large —— Small
All reasons connected with job except wage & opportunities — Large —— Small
All reasons outside of job — Large —— Small
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec
1922
INDUSTRIAL RESEARCH DEPT

TURNOVER
TURNOVER FOR


TURNOVER LESS LAYOFFS AND TURNOVER FOR OPPORTUNITIES ELSEWHERE
Small
Large
Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec
1922
INDUSTRIAL RESEARCH DEPT

for employment in the first half of the year, when turnover was rising, and the important fact that the time of change in direction was similar is all that is stressed.

When, as in 1922, the general similarity of movement is concurrent with a marked increase in turnover it is necessary to show that the likeness pointed out is not due to growth alone and is made up of factors common to all firms. The increase in turnover in 1922, therefore, needs more attention.

Taking first the matter of shortage of labor so frequently referred to in the local market during this year, it may be said that there has been an increase in turnover far beyond any shifting that can be accounted for by even the most extreme view of the lack of employees to fill jobs.

Four factors affect this increase in turnover: first, the return after the depression of employees to former jobs; second, the transition character of the period which made possible the hiring of men obviously unsuited to the type of work, to fill a temporary demand; third, the actual shortage of certain types of key employees in skilled trades; fourth, the activity of the building trades and the adjustments of wage rates.

Take first the return of employees to former positions. It has been a general practice for firms to send for the employees last laid off at their plant whenever business becomes active. Reports indicate that in the main employees have responded to such calls. This means that two workmen are shifted to fill one job. Consequently the turnover by itself gives an impression of, and is being regarded as an indication of, greater shortage of labor than the actual situation would warrant.

Secondly, consider the transition nature of the period. During this period when unskilled labor has been highly paid by reason of the demands of the building trades, plants have given applicants such as weavers, knitters, etc., known to be skilled in other industries, trucking and similar classified jobs, because such employees are sure to shift as soon as their own employment becomes active. This is done to fill the immediate demand although the firms know such a hiring policy will increase their turnover later.

Thirdly, the lack of key employees, such as ship carpenters and car-painters, die-makers and moulders, polishers and grinders, has been felt in the car plants as well as in the shipyards and metal industries. There is a divergence of opinion as to how great has been the absolute under-supply of workers in any employment, with the exception of a few skilled jobs. There has been little facing of what is perhaps the foremost problem before American industry, namely, the readjustment which must be made in methods of doing business in order to meet a

growing shortage of labor or a permanent shutting off of the sources of the unskilled labor supply. The greater demand, however, is reflected not alone in the shifting of employees, but in the greater opportunities for work for young people. The applications for work by juniors who must seucre a school certificate for employment are increasing. After a low month in July, the index numbers increase to November, 1922. By October the figure is higher than in the same month of the busy year of 1919. When one considers the issue of repeat certificates, the high figure of November, 1922, becomes more significant as contrasted with 1921, or even with 1919.

ISSUE OF CERTIFICATES TO JUNIORS

Month	Year	Percentage General Certificates	Percentage Repeat Certificates
August	1921	100	100
	1922	113	131
	1919	181	288
September	1921	100	100
	1922	145	142
	1919	170	189
October	1921	100	100
	1922	162	179
	1919	151	198
November	1921	100	100
	1922	169	182
	1919	140	158

1921 being taken as a base, comparison is made with 1922 and 1919, as typical years of increased employment. These figures apply to the Pennsylvania area as supplied by the Junior Employment Service.

The actual increase among older employees is shown by the figures for male entrances to 132 metal plants in the table below.

NUMBER OF MALE ENTRANCES TO 132 METAL PLANTS 1922

Month	Entrances	Exits	Pay Roll
January	2990	3557	38188
February	2779	3784	37183
March	4634	3013	38804
April	4930	3424	40310
May	5810	4698	41422
June	5788	4469	42742
July	5732	4718	43755
August			

It has already been pointed out that the turnover curve began to shift downward in October. At that time there was reported less demand for both common and industrial skilled labor.

Our fourth point covers activity in the building trades and the adjustment in wage rates. Perhaps the factor that affected the shifting of employees in the late winter and early spring months was activity in the building trades. In February the turnover less lay-offs was at 44.2 per cent, at 86.2 in June, at 82.5 in July, at 100.1 in August. In September it had reached the high figure of 117.8. The influence of the building trades was felt first in the unskilled labor groups. At a time when the going rate for unskilled labor ranged from 30 to 35 cents an hour, the building trades were offering 55 and 60 cents. The result was a rate high enough to shift not only unskilled employees but the less highly paid of the classified labor group.[1] As the summer wore on, the effect of the building rates was reported in the wood-working and metal trades groups of skilled workers. For instance, wood pattern-makers accustomed to get about 60 cents an hour in the metal trades could get about 90 cents to $1.25 as carpenters in construction work. The Metal Industries Association of Philadelphia gives a comparison of average earnings in the autumn of 1922 which shows that in 59 classifications of their survey earnings were "only 8.1 per cent below the averages of the same classifications in April, 1920. This is undoubtedly due to several increases in rates having been made in the last few months, as the reductions made during the period of depression average 22 per cent. From August 1 to November 1, nineteen firms, employing one-fourth of the total employed by all of the plants surveyed, made general increases in the wage rates averaging 12.7 per cent."

Turnover of Skilled Trades by Reasons for Leaving

Let us now return to some more detailed analysis of the curves of instability. Having noted this general similarity in trend, it would be of interest to be able to say whether that movement was identical for skilled, semi-skilled, and unskilled workers. Unfortunately there is no classification which will permit of a comparison from plant to plant. The only group that one can venture to compare is the one reported as "unskilled laborer." The turnover for this group was low

[1] It has been usual to date the beginning of the increases in rate from the 22d of August, when the United States Steel Corporation announced its 20 per cent increase. As a matter of fact, in the Philadelphia market the shifting had compelled employers to adjust wages for die-makers, pattern-makers, moulders, and other classes of employment several months before the announcement of the advance by the steel corporation.

in February, 1922. From then until June the amount of shifting was very marked at all the plants. After a slight stabilizing in August, the group turnover rose again in September. It was more steady in October and November. Comparing this with the movement already cited for the market as a whole, it may be said that not only did the turnover for unskilled labor affect the curve most, almost determining its contour, but the shifting in this group began months before there was any indication of increase in turnover among workers in the more skilled occupations.

Dividing the firms into two groups according to size, we find that the smaller firms returned to normal production more rapidly and also have a higher turnover—less lay-offs—during 1922 than the large firms. In that year both groups tend to run parallel until May. The drop in June in the small firms is followed by a drop in July in the larger group of large firms. Both curves rise again at about the same rate. The drop in September in the latter group is coincident with a slowing down in the curve of the smaller plants.

Maintaining this separation of firms according to size, let us consider the movement of turnover when one separates the major reasons for leaving, dealing with those relating to (1) wages, (2) wages and opportunities elsewhere, (3) the job as contrasted with reasons outside the job.

In the large firms dissatisfaction with wages caused a turnover of only 5 per cent in any month of 1922, while in the small firms it varied, rising as high as 30 per cent; the curve for wages alone is not unlike the general turnover curve. The attraction of better jobs elsewhere shows its influence in both groups. Not only is it responsible for a large share of the turnover, but that share is such that the curves tend in the same direction as the curve for all turnover less lay-offs. Seven of the nineteen firms considered, three small and four large, have no exits reported as due to dissatisfaction with wages, although "better job elsewhere" may be an indication of poor wages. Considering the firms individually for this reason, we find that with two exceptions (one metal and one chemical) the curves for "better job elsewhere" correspond with each other.

TABLE II

TURNOVER LESS LAY-OFFS AND TURNOVER FOR OPPORTUNITIES ELSEWHERE

Small Firms

Month	Total Pay Roll	Turnover Less Lay Offs		Opportunities Elsewhere	
		Number of Exits	Per Cent of Exits	Number of Exits	Per Cent of Exits
January	2755	103	44.9	42	18.3
February	2812	120	51.2	32	13.7
March	2837	174	73.6	47	19.9
April	2841	194	81.9	53	22.4
May	3803	332	132.7	139	55.5
June	3056	274	107.6	117	45.9
July	3103	354	136.9	116	44.9
August	3252	435	160.5	176	64.9
September	3329	555	200.1	251	90.5
October	3399	593	209.4	230	81.2

Large Firms

Month	Total Pay Roll	Turnover Less Lay Offs		Opportunities Elsewhere	
		Number of Exits	Per Cent of Exits	Number of Exits	Per Cent of Exits
January	18,404	599	39.1	194	12.6
February	18,238	617	40.6	212	13.9
March	18,030	921	61.3	323	21.5
April	18,098	943	62.5	327	21.7
May	18,193	1177	77.6	397	26.2
June	18,491	1273	82.6	458	29.7
July	18,674	1143	73.4	403	25.9
August	18,803	1405	89.7	496	31.6
September	18,660	1604	103.2	633	40.7
October	19,232	1501	93.7	522	32.5

Further reasons connected with the job have been grouped together: dissatisfaction with wages, working conditions, hours, and labor policy and work elsewhere. In the large firms turnover reaches only 55 per cent, while in the small it is 132 per cent at its highest. The two curves are nearly parallel in 1922 until April, after which the line for the small firms rises more rapidly till July, the drop coming one month later than in the large firms.

When one considers reasons not connected with the job, it will be seen that the curves are low and fairly uniform and tend to change only gradually from month to month. It may be noted also for the small firms that reasons connected with community and outside affairs shape the curve in the opposite direction to that formed by reasons

connected with the job, especially during the period from June on. The uniformity of turnover for physical reasons is particularly noteworthy since the shifting ranges only from 5 to 8 per cent, tending slightly higher in the winter months. In the large firms the reasons outside the job are higher than those within when wage opportunities are omitted; the reverse is true for the small firms.

TABLE III

TURNOVER FOR MAJOR REASONS

Small Firms

Month	Total Pay Roll	All Reasons Connected with Job		All Reasons Connected with Job Excluding Wage Opportunities		Reasons outside Job	
		No.	%	No.	%	No.	%
January	2755	50	21.8	8	3.5	8	3.5
February	2812	52	22.2	20	8.5	13	5.5
March	2837	65	27.5	18	7.6	19	8.0
April	2841	91	38.5	38	16.1	23	9.7
May	3003	194	77.5	55	22.0	29	11.6
June	3056	223	87.5	106	41.6	30	11.8
July	3103	251	97.1	135	52.2	25	9.7
August	3252	276	101.8	100	36.9	44	16.2
September	3329	368	132.7	117	42.2	39	14.1
October	3399	378	133.4	148	52.2	56	19.8

Large Firms

Month	Total Pay Roll	All Reasons Connected with Job		All Reasons Connected with Job Excluding Wage Opportunities		Reasons outside Job	
		No.	%	No.	%	No.	%
January	18404	258	16.8	64	4.2	162	10.6
February	18238	280	18.4	68	4.5	115	7.6
March	18030	389	25.9	66	4.4	204	13.6
April	18098	412	27.3	85	5.6	194	12.9
May	18193	547	36.1	150	9.9	261	17.2
June	18491	601	39.0	143	9.3	279	18.1
July	18674	537	34.5	134	8.6	236	15.2
August	18803	665	42.4	169	10.8	266	17.0
September	18660	851	54.7	218	14.0	291	18.7
October	19232	739	46.1	217	13.6	280	17.5

Causes for Increase in Turnover

It has been shown that there was a tendency for turnover less layoffs to move in the same general direction over a considerable period. It has also been stated that the curve for unskilled laborers tended to conform to this trend. When the curves were considered in greater

detail for reasons connected with wage opportunities, it was shown that the important single causes shaping the turnover in this period were given either as "better wages" or "better opportunities."

What, then, is the significance of stressing market factors? Up to this time it has been usual to regard turnover from the point of view of the individual establishments. The problem has been regarded primarily as of importance in terms of the organization from which the employee has shifted. There has been a general tendency for firms to assume that conditions can be adjusted within the plant in such a way that under any circumstances employees could be held within the organization. It has been a matter of disappointment to some employers to discover in this transition period that their turnover has seemed to be beyond their control, because we had not prepared our thinking about turnover for any reasoning concerning the possible factors outside the plant, of advantage to the employee, which would influence him to shift. In our market there has been more alarm concerning labor shortage than any lack of employees warranted. There has been much discussion and hurried comparison of wages on jobs which were far from comparable. The conclusions of the continuous study of inter-market movement would seem to show that some of the turnover was merely due to reinstatement of employees temporarily waiting for opportunities on former jobs. Some was due to an unusual building program—one which continued late into the fall and is likely to hold many employees even through the winter months. The adjustment connected with the shortage of key workers indicates two things, the need of actual study of the problem of training, and some willingness to readjust business on the basis of a new and less wasteful use of labor time. The shifting in many cases was merely the workmen's method of finding the going rate.

This paper is meant to stress wider economic aspects in the study of labor turnover than are found when the discussion stops with the study of an individual plant. The questions which the paper raises are: To what extent does labor turnover indicate conditions within an organization? To what extent does labor turnover indicate economic factors disturbing the market? No one could say at this time where the line of demarcation falls. It is, however, certain that discussion should be shifted to give emphasis to the factors in turnover due to wide fluctuations in the labor market.

ECONOMIC THEORY AND PRACTICE—DISCUSSION

FRANK H. KNIGHT.—My interest being that of the economic theorist, I shall limit my discussion to a few observations on Professor Clark's treatment of overhead cost. I am in agreement with the main contentions of the paper, and only wish to emphasize the importance of its argument and conclusions.

The general theory of cost which underlies this argument is that of alternative cost as an all-inclusive cost category. In the nature of the case, the only cost of anything that can matter is the sacrifice of some alternative. The so-called "pain-costs" merely represent alternatives which involve creating value directly, without the intermediary of marketable goods or services, that is, such alternatives as culture, recreation, play, or "loafing." It is quite immaterial whether the "irksomeness" of labor is regarded as a positive pain or as a sacrifice of pleasure; if there is any "cost" it is manifestly due to the sacrifice of some *preferable* alternative, and the whole pain-pleasure terminology is open to serious question. Moreover, it is fundamental that material resources as well as human laborers are subject to competition from direct recreative employments of many sorts, and hence that their use in industry involves costs which are strictly analogous logically to the pain costs of labor. We must assume in both cases that an ideal adjustment for society as a whole means a division or allocation of human and material resources between pecuniary and non-pecuniary or recreative employments in such proportions that equal "marginal utilities" are obtained from both uses.

Clearness on this general theory is essential to a discussion of Professor Clark's principal thesis, that "idleness is waste." It is convenient to divide the problem and consider separately the costs which represent human and material services respectively, and also to take up each of these elements from a long-time and a short-time point of view. The long-time view, however, can be briefly disposed of, since there is little to say beyond applying the general economic principle already stated. Idleness, that is, the non-employment in pecuniary uses of either human beings or material resources, is waste just in so far as the persons or things in question are not put to use in some way which creates value (or avoids evil, if one insists on separating the two) in some manner not bound up in the pecuniary valuation process, and to an extent at least equal in importance with the industrial product which would be realized. It will be impossible to do more than suggest the question as to whether on the whole society does or does not put too large a fraction of its total social energy into the creation of the kinds of things which pass through the market and receive prices. Many economists would surely doubt or deny that there is too much human "unemployment" on the whole, if it were properly distributed, regularized, and provided for. In the abstract it is equally possible that we ought to devote more of our permanent wealth to the form of durable consumption goods, parks, museums, homes, sporting goods, toys, etc., and less to uses productive in the pecuniary sense.

Turning to the short-run view, that is to economic fluctuations, it is necessary to distiguish again between variation in total industrial activity and variation in one industry or group of industries corresponding to opposite variations in other industries or groups. From either standpoint, the fundamental question is that of the mobility or fluidity of the various cost goods. With reference to fluctuations in industry as a whole, however, and to the competitive system as it actually works, it is clear that most of the real costs, both human and material, are really fixed; the idleness of resources, material and human, in a general slump, represents waste if nothing worse. There can be little diversion to cultural or recreative uses. Some recuperation and repair are no doubt realized, but the physical drain and actual maintenance costs of both labor and material equipment must be fully equal to those of normal industrial activity. The business depression represents a cost to society which is probably understated by figures showing the decrease in marketable output.

In the discussion of cost variations, the standpoints of the single industry and of the single establishment in an industry are commonly confused to the serious damage of the analysis. I can only refer to the idealized case of an industry in a condition of stability, in which all the establishments are of the most efficient size, and must further assume a condition hardly possible in fact, that all establishments are affected alike by variation of output in the industry as a whole. The crucial datum with respect to cost variations as output changes is that the cost goods and resources, material and human, used in any industry, are in all degrees specialized to that industry. For simplicity we must and do contrast the "fixed" equipment with that which is transferable from one industry to another, or "fluid," though we know that there is no dividing line. We also speak of a certain "capacity" in the fixed equipment of any industry. With reference to a fluctuation in output it is obvious that the services of this fixed equipment are the true fixed cost or social overhead. But there is another cause of variation in cost per unit of output in the varying efficiency due to changing proportions in which the transferable equipment is combined with the fixed. The possible cases are too numerous to mention in detail. Obviously it is a crucial question whether the industry is working above or below the normal capacity of its fixed equipment when a variation in output occurs.

Professor Clark's most important point, I take it, is that as industry is organized under the competitive system, costs which from the social standpoint are fixed may often be avoided by the owner of the business when demand falls off, by simply leaving the productive factors, especially labor, unemployed and allowing their services to go to waste. The farmer commonly cannot profitably do this, since he himself owns most of the labor and capital which he employs, and he uses no raw materials to speak of. The industrial entrepreneur, who buys from other entrepreneurs partial products of large value and who hires productive services, especially labor, on short term contracts, can reduce his own costs, though not the real costs of the industry to society, by reducing output or shutting down. Undoubtedly this fact goes far in explaining the phenomenon of the business cycle, since it involves, as Professor Clark points out, a vicious circle; each curtail-

ment reduces the demand for other products and helps to force curtailment in other industries. It seems to me that he has hardly given its full merited emphasis to the importance of the disharmony between individual and social interests which results from these conditions. He has placed his finger upon an inherent and far-reaching weakness in the competitive system as a method of social organization. It seems probable that any provisions which promise to deal adequately with this disharmony and to iron out the disastrous fluctuations of industry must carry us no inconsiderable way in the direction of socialism.

REXFORD G. TUGWELL.—Consideration of the three papers we have just heard might lead an outsider to wonder how such diverse subject matter could possibly be crowded into one classification; and this very apparent unlikeness among them has made me ask myself what the hidden similarity consisted in. How can the two words *theory* and *practice* include at once a discussion of the social import of overhead costs, one of commercial rent and its relation to profits, and one of local factors in labor turnover? It is this particular question that I should like to answer.

Practice by dictionary definition means the "pursuit of an employment or profession"; *theory* means the "philosophical explanation" of the phenomena of the employment or profession. But theory as a term must have another meaning if we are to see any relationship between it and practice other than an attempt to analyze the way in which phenomena happen to have occurred in the way they did occur. If this were the only content of the term, ours would not be nearly so useful a profession in the world as it now is. But, as a matter of fact, our theory exists very largely as attempts to offer suggestions for the betterment of economic arrangements, and thus has a justification beyond its explanation of phenomena.

Theory is a product of the thought process; and, if we may assume that thought is not merely random mental activity but is always the attempt to resolve some difficulty, we may then go on to a definition of theory as *sustained thought about some difficulty of practice*. Theory arises because of the inadequacies of the customary way of managing affairs.

An exception to this would be formed by the so-called theory of pedagogical texts which is built up by a thought process incited by another form of mental difficulty—the need to transmit a body of knowledge successfully from teacher to students. Any suggestions for change that might find their way into such thinking would be few and would be purely incidental to the main purpose. Such texts present the problem to their writers of a clear and orderly presentation of systems of practice so that the student may comprehend affairs that exist and *as they exist*. This is, of course, the formal means devised for assuring the continuity of culture. The teacher is the representative of an old order presenting the inheritance it has received and the additions that it has been able to add, to the new order, represented by the student. And, of course, the need for it becomes more pressing as industrial practice becomes more complex. But if this is to be termed theory, then the thinking that is engendered by the inadequacies of practice and which by its very nature is not explanatory or

analytical but, on the contrary, destructively critical (either specifically or by implication) of methods of practice, ought to be called by some other name.

We are clear about this in a rough sort of way. We call books about things as they are, books of *principles*; and principles that have passed into history become *doctrines*. A principle connotes respectable acceptance and no novel ideas would be included. But a theory is almost always a novel idea; and so principles and theories ought not to be confused. We gain in calling them by their right names.

So it seems fitting that our texts for use in transmitting the thought of one age to the men of the next age should be called "principles of economics," and should be composed of the best accepted analysis carefully systematized and clearly presented; and, likewise, that our record of past principles should be called "histories of doctrines." But this is not theory. When one theorizes he is thinking about ways in which our institutions can be made to work better. And this is not a pedagogical effort, but one of quite another nature. It is, in fact, the process of the formulation of immediate ideals.

I have a number of friends, men of affairs, who are interested in the "philosophical explanation" of what they are doing as they go about their business. They call this "theory" as contrasted with "practice"; but it is not really theory at all in which they are interested, but the analysis of practice rather.

But it might profitably be pointed out that they might also gain something from the study of theory, that is to say, the cogitations of economists about the ways in which the industrial organization might be made to operate more successfully. Cases in point are, of course, furnished by the papers to which we have just listened. For the managers of industry, in general, represent practice. It is the activities carried on by them, carefully collated and generalized by specialists, that form the body of economic principles. And it is the criticisms of their methods and suggestions for betterment that, in general, make up the subject matter of theory.

We have been listening here to theory; and it is the fact that these papers are all theory in this special and accurate sense, which creates their similarity. They commonly had beginnings in mental difficulties raised by specific needs for betterment which formed challenges to the intelligence of thinkers. When Professor Secrist searches for the definitive relationship between commercial rents and profits and comes to the conclusion that the rise of the one is inevitably associated with the fall of the other, and is driven to the immediate assignment of the reason for this condition to the imperfections of competition as an adjusting force, he is in effect pointing out that competition, upon which we rely to perform this function, simply does not work and that something will have to be done about it. And when Miss Bezanson discusses the problem of labor turnover as affected by local factors, she is driven again and again to making suggestions for the cutting down of labor turnover. That is why the study of labor turnover is profitable—because it forms a problem which is a defect of our industrial

system, and is also a challenge to the intelligence of students in that field. And when Professor Clark attacks the problem of the social import of overhead costs and comes to the conclusion that employers, for the good of society, ought to bear a larger share of labor overhead than they customarily do; or that our methods of financial accounting are faulty that lead us to the conclusion that idleness is not waste and that it is better to have labor remain idle than to engage in tasks that do not issue in commercially profitable product—he is making very definite suggestions for change.

It seems to me, at least, to be clear enough that the study of such papers as these which are theoretical, holds the key, really, to industrial progress. Certainly it cannot be too much to say that their study and the wide and rapid dissemination of their concrete suggestions, with the trial of their effects in many imaginations, and, if it seemed feasible then, their trial in practice, would yield results that could be got in no other way.

But then, too, the purely educational value of theory as a subject of study as over against the study of principles or doctrines ought not to be overlooked. For the study of current theory is the study of trained intelligences at grips with problems that are the crucial ones of modern life. It might be argued, of course, that it would be as well for this purpose to study principles or doctrines since they represent the attempts of trained minds, made in the past, to meet similar problems, and even better, since these are now raised out of the field of emotional controversy; and this might be true if it were not that, in the first place, students are more interested, necessarily, in contemporary life and so drawn naturally to its problems and, in the second place, that, try as we may, we cannot ever completely recreate the conditions in which the minds of the past worked, as we should have to be able to do to make the lesson a really valuable one.

More and more, education becomes a matter of awakening the intelligence of the student and giving his awakened intelligence material to work with which seems to him important and interesting. And for this purpose there could be no better educational device than the formulation of these recondite difficulties—which are nevertheless important and pressing—setting the student to try for an intelligible and workable solution, and then presenting him with the finished theory of the trained economist as a corrective of his own attempt. A student so trained ought to be better fitted to take his place in the world of affairs than one who has merely been required to memorize the accepted principles of an older generation, transmitted to him by his masters.

In all these ways, for the purposes of business men, who must adopt them if they are to be adopted, and must give them their significance in a going world if they are to attain any real significance; for the purpose of the student who needs them as a supplement to his formalized study; and of society, which needs the suggestions for improvement, theory, such as is embodied in these papers, ought to have wider uses than we have been inclined to give it.

WAGE THEORIES AND WAGE POLICIES

By John R. Commons
The University of Wisconsin

Seeing that other speakers will follow with a discussion of concrete and practical problems, I shall limit myself to economic theory in its relation to economic policy, abstracted from, yet common to, the concrete problems as I understand them.

Adam Smith started economic science with two theories which did not always coincide—a theory of value and a theory of prosperity. The theory of value began with the individual, the theory of prosperity began with the nation. According to the theory of value the individual acquires for himself the largest possible *net* income regardless of the effect on others. According to the theory of prosperity the nation, by its laws and customs, proportions inducements to various classes of producers and non-producers in such a way as to augment or retard the *gross* income of the nation. By the help of his theory of value Adam Smith saw and exposed many cases of bad proportioning in the national policies of his time and showed that they made the national income less than it might have been by a better proportioning. Then he reconciled his theories of value and prosperity by constructing an ideal society in which there should be no economic legislation, no corporations, and no labor unions; in which case, he thought, each individual, though seeking only his own prosperity, would be guided by an "invisible hand" leading him to augment the prosperity of the nation though he did not intend to do so. Thus his individualistic theory of value had to be supplemented by a theory of divine providence in order to be reconciled with his theory of prosperity.

Now, as we know, Adam Smith's ideal society, to which his theory of value might fittingly apply, has not emerged. One corporation has several thousand investors, and employs several hundred thousand laborers, and a union of 300,000 laborers lays down its tools as though it were one man. There is no divine providence about it, and if there is an invisible hand it is the hand of a board of directors or an executive committee. Instead of individuals we have mass movements and mass psychologies. Instead of a steady flow of industrious workers and small business men and farmers in an ideal society, quietly shifting about as individuals from poor jobs to better jobs, as Adam Smith hoped, we have the whole world holding on for higher prices and wages in a period of overworked prosperity and then suddenly stopping in unison without knowing why. What is wanted is to get back to Adam Smith's theory of prosperity and to

construct a theory of value, of wages, interest, and profits, which shall be, at the same time, a theory of prosperity, without the invisible hand.

The essential thing about a theory of prosperity is that it starts with the gross income and gross product of the nation as a whole, instead of the net income of individuals, and with the laws, customs, usages, conflicts, and inducements which lead individuals and classes of individuals to augment or retard that national income and product. And the theory of value that fits such a theory of prosperity is a theory of a *process* and not an *attribute*—a process of valuing by millions of individuals in the course of billions of transactions, through which individuals and classes of individuals are persuading, coercing, commanding, obeying, and propagandizing each other. The nation is a going concern, a process that has no beginning and no ending, a process of inducing people to work, to save, and to manage, while value itself is not an attribute of commodities nor a pain or pleasure of individuals, but value is the process of valuing by which these inducements get themselves realized in the behavior of laborers, investors, and business men.

The concept of value as a verb instead of a noun changes the theory of value from a deductive theory of what individuals would do if they were free, equal, intelligent, and sympathetic, as in Adam Smith's ideal society, to a statistical theory of what they actually and probably will do since they are neither free, equal, intelligent, nor unselfish.

I used to think that the big business men of the financial district in New York were free and intelligent, but it is likely that a small study club in a little western town is equally intelligent; and that when these financiers act in unison it is because for the time being their selfishness coincides with forces that they do not understand and cannot control. Theirs, too, is a mass psychology and mass movement, like that of organized and unorganized laborers, or organized and unorganized farmers.

We can see statistically how this mass psychology of all classes operates. At a time when the rate of bank discount is low, when money is "easy" and prices look as though they were rising, then all individuals with one accord, but without conspiracy, mark up their prices and wages, hold back for higher prices, and give the false impression that they are a monopoly whereas they are mostly an unorganized mass psychology. Then when the bank rate goes up and money gets "tight," they all with one accord suddenly mark down their prices, throw overboard the stocks of goods which they have been holding, and give the correct impression of mob psychology.

The effect can be seen in the statistics of the nation's gross product and gross income—at one period an immense but wasteful energy of

overproduction, at another period idle plant and idle workers. The theories of value, and the theories of wages, interest, and profits that explain these phenomena cannot be mere individualistic or deductive theories of marginal utility, but must be a statistical theory of the lags, forecasts, and probabilities of mass psychology and national prosperity.

An auspicious beginning of the statistical study of this mass psychology and its effect on national prosperity, has been made since the Great War. The Harvard Committee on Economic Research has greatly improved our statistical instruments for measuring and forecasting the business cycle. The National Bureau of Economic Research has started the accurate measurement of our gross national product and its distribution into national income. The Committee of the Federated American Engineering Societies has given us the beginning of a national survey of waste in industry. These three notable undertakings should be looked upon as almost a new era in economic theory. For the first time economic theory has the foundations for a theory of prosperity, and such a theory is at the same time the foundation for a national economic policy. Theory and policy are inseparable. A national economic policy is a policy of proportioning inducements to individuals and classes in order to promote national prosperity. An economic theory is an explanation of all the forces at work and of the probabilities that may be expected in working out a policy. A policy looks to the future—a theory criticises, modifies, or justifies the policy.

One subdivision of a national economic policy is a national wage policy. But a wage policy cannot be separated from a land policy, a money and credit policy, a taxation policy, or a policy regarding business profits, in its many varieties, all the way from farmers to railroads, trusts, bankers, and financiers.

The first large and dominating fact is our credit system. Primary producers must be paid thirty days to thirty years before the ultimate consumers make the final compensation to all preceding producers. The process of making these payments is altogether a process of forecasting; and it is out of the mistakes of forecasting that the control of most of our industries has eventually been turned over to the bankers and financiers whose specialty is that of forecasting. So far has this centralization gone that today it is the financiers at the lower end of Manhattan who determine, for the bulk of the big industries of the nation, what shall be the nation's wage policy. Although strenuously competing with each other, and often very bitter towards each other, yet they act very nearly in unison on the nation's wage policy. Occasionally a business man, like Henry Ford, revolts but if perchance he should make a serious mistake in

his process of forecasting, he, too, might fall under their control, and likewise his wage policy.

Confronting this financial control are the theories and policies of organized labor and of other laborers who would be organized if they could. For it should be recognized that, while organized labor includes only perhaps 15 to 20 per cent of the total number of laborers, yet if we could enumerate the existing laborers who, at one time or another in their lives, have tried to organize but have been defeated, the percentage of those who potentially hold to the theories and subscribe to the policies of organized labor would be considerably more than 15 to 20 per cent. Thus we have two mass movements and mass psychologies, partly organized, partly unorganized, with two sets of theories and policies, endeavoring to impose the same on each other and on the nation. That third group, sometimes known as the middle class and largely composed of farmers, has been practically reduced to impotence in some of the countries of Europe and in Australia, and it requires no extensive inquiry to note that a similar process is going on in this country.

If, now, we examine the two main groups of wage theories which have claimed attention during the past hundred years, we shall see that they are based on Adam Smith's ideal of a society of individuals shifting readily from one job or industry to another, rather than on the actual society of laws, customs, mass movements, and mass psychologies.

First is the original cost-of-subsistence theory based on the evident fact that the employers must pay wages, and on the theory that these wages will not permanently sink below a minimum that will keep the population intact. This form of the subsistence theory ended in Lassalle's iron law of wages, which denied that either coöperators or organized labor could keep wages above the physical minimum, and hence led to the policy of socialism.

Then the subsistence theory shifted in America to Ira Steward's golden law of wages, which maintained that wages were determined by the cost of subsistence of the most expensive laborers, those whose standards of living were the highest. Yet this theory required a policy of national and state legislation which would limit the hours of all laborers to eight per day, on the principle that standards of living might be raised by indirect compulsion of individuals. When Ira Steward's policy failed to get a vote of the legislatures, his theory was taken over in the trade-union policy that organized labor should lay down the rules for industry, and thus make it possible for high-standard laborers either to bring low-standard laborers up to their level or to exempt themselves from the competition of low-standard laborers.

Hence, in either of its formulations, the cost-of-subsistence theory overlooked the cycles of unemployment, the mass movements of politics or industry, and the need of having a national product out of which wages might be paid. The last mentioned omission led the way to productivity theories. According to this theory in some of its formulations, every laborer gets in wages the exact equivalent of what he produces. This also is based on the evident fact that the employer cannot continuously pay wages unless the laborer turns over to him a product, and on Adam Smith's ideal of individuals quietly leaving positions where their product is meager and entering positions where their product is greater. The defect of this theory was in the double meaning of "productivity." If the isolated laborer creates a product for his own use, then, of course, his wage or income is exactly equal to his product. But if he creates a product for sale, his wage is equal only to the exchange value of his product. One is physical productivity, the other is value-productivity. And value-productivity is increased just as much by *not* producing too much as by producing enough, and is diminished by producing too much. When this predicament is discovered, instead of individuals peacefully transferring themselves elsewhere, the whole of the national industry suddenly shuts down, and a mass movement ensues demanding a protective tariff or restriction on immigration, or shorter hours, or some other policy of restricting supply, either by legislation or by organization. Thus the productivity theories overlooked the cycles of overproduction, just as the subsistence theories overlooked the cycles of underproduction.

The Wage-Fund Theory was the first formulation of a theory of national prosperity that might include both the productivity and subsistence theories. It was based on the truism that the total amount paid in wages could not be greater than the total amount which capitalists were willing and able to pay as wages, and on the fallacy that capitalists would pay exactly that given amount in wages, no matter how many or how few the number of laborers. Hence trade unions could not raise wages. They could only transfer wages from the unorganized to the organized workers—and the only way for laborers to increase their wages per capita was to practice restriction of population.

Now, it is the wage-fund theory, or something similar, that underlies mass movements and mass psychologies. The intentions of capitalists do determine the amount of products that shall be paid as wages, but the wage-fund theory did not explain what it was that determined the intentions of capitalists. All that is told was that self-interest determined their intentions. This is accurate enough but not illuminating. It leads us only to the conclusion that neither

the desire to increase the production of wealth nor to increase the happiness of mankind determines the intentions of capitalists if there is no profit to be gained, and, therefore, the wage-fund theorists had to fall back, openly or impliedly, on Adam Smith's invisible hand to supplement the intentions of capitalists. But this solution is inadequate, for self-interest evidently operates at one time to increase the production of wealth, when profits are in prospect, and at another time to restrict or stop the production of wealth, when profits begin to slow down.

The only alternative to Adam Smith's solution, short of socialism, seems to be a national policy respecting profits, interest, credit, taxation, and wages which shall induce capitalists, through their self-interest, continuously to promote the production of wealth and the happiness of mankind and at no time to restrict or stop production. Such a policy is a very large order and may be impossible. Yet the report to the Federated Engineering societies made a beginning in a tentative way for six industries by attempting to allocate the responsibility for existing waste in industry on the basis of whether management, labor, or the outside public is in a position to remove the causes of waste. Management's responsibility appears to range from 50 per cent to 81 per cent; labor's responsibility from 9 per cent to 28 per cent; outside contact, not controllable by management or labor, 9 to 40 per cent. If to these were added the responsibilities of financiers in the control of our credit system with its business cycles, causing an additional waste not covered by the engineers, it may be judged how large indeed is the field for national policies that might induce those in control of industry to augment the national production of wealth.

Even where labor organizations are cited as responsible for waste, a large part of the waste which they cause is due to the seasonal and cyclical nature of the industry and the resulting theory common to all laborers, organized and unorganized, and similar to the wage-fund theory, that there is only a limited amount of work to be done, which should, therefore, be stretched out and shared with the unemployed. What is true of capitalists is therefore also true of laborers. For them the old-time productivity theory is meaningless, for its real significance is that of value-productivity and not physical productivity. Both they and capitalists can produce too much, just as they can produce too little. And the older cost-of-subsistence theory is obnoxious, for it gives to the laborers no share in the increasing wealth of the nation. Did we exist in Adam Smith's ideal society, without legislation, corporations, unions, or depressions of trade, then the older theories might suffice. But living, as we do, in a society where organizations and mass movements are pressing

on all sides, and industry is oscillating, those theories are necessarily converted into policies. Every board of arbitration, every governmental agency dealing with labor, every legislature and court of law, confronted with the labor problem, has its part in formulating this national policy. The national product must be increased, but it cannot be increased except by such a conscious guidance of the self-interest of individuals and classes of individuals as will lead them to augment the national wealth without intending to do so.

Now the mass movements of labor, whether organized or unorganized, are not in a position greatly to augment the national product directly by their own initiative. They depend on the initiative of capitalists. Their action is negative. Their only power is the power to quit work or refuse to work in the effort to maintain or enlarge their standards of living. Indirectly this negative power is a compelling force that is inducing capitalists to adopt wage policies that shall augment the nation's wealth while increasing their own profits. Without this pressure from below the modern "personnel" work, so-called, and its policies of labor management, would attract little or no attention from the absentee capitalists who control our industries. It is this that is doing a smuch or more than anything else to eliminate waste in industry. The mechanical efficiency and inventiveness of our industries is already far greater than our capacity to use the same continuously and efficiently. It is the day-to-day guidance of the human factor in industry that now reveals itself as the limiting factor. And modern business under the stimulus of profits is entirely capable of accomplishing in this direction as much as it has accomplished in the mechanical direction, if the nation's policies are such that profits will be found in this direction. As long as we had an abundant supply of cheap labor from Europe and Asia, there was no need of an enlightened labor policy on the part of capitalists, and the effort now to open the gates again is an effort to avoid an efficient wage policy. Restriction of immigration and freedom of labor to quit work may be expected to yield on the part of business management an efficiency in the field of so-called "industrial engineering" similar to that in the field of mechanical engineering. The waste of the human factor is the big and irreparable waste. To avoid this waste the capitalist system should take on itself, voluntarily or by legislation, the responsibility of furnishing continuous employment; should direct itself to reducing labor turnover, to dovetailing seasonal work and to smoothing out the business cycle. Labor cannot reach a very high efficiency when the hopes of the laborers are dashed and their resentment is provoked by these breaks in the continuity of employment. For after all, it is willingness that produces wealth. There is no invisible hand about it, no natural equi-

librium of forces of nature that augments the national wealth by mere unguided self-interest. There is rather a national economic policy, whether intelligent or mistaken, conscious or unconscious, that induces individuals and classes of individuals to augment or retard the national wealth while pursuing only their private wealth. The subsistence theories, the productivity theories, the wage-fund theories, are by no means antiquated in the formulation of these national economic policies. They merely resolve themselves into standards of living that demand recognition, elimination of waste that permits their recognition, and the total national process by which the laws, customs, and mass movements convert the national capital into national income. None of them serves by itself, as Taussig has well shown in regard to the wage-fund theory, to "give guidance as to any concrete difficulties or practical problems."[1] Yet each of them is a necessary ingredient to be somehow given its due weight in formulating the nation's wage policies with reference to the nation's total economic policies.

[1]Taussig, F. W., *Wages and Capital,* 332 (1900).

THE STANDARD-OF-LIVING FACTOR IN WAGES

By William Fielding Ogburn
Columbia University

The standard of living as a factor in setting wages came to be of considerable importance during the war when prices were rising. Previously, interest in this aspect of wages had come about through the study of poverty, through the normal growth of budget studies, and through the development of state minimum wage laws for women. During the war period, the first use of the standard of living as a basis of wage settlements was, I believe, by the President of the American Economic Association, Professor Seager, who was then the Secretary of the Shipbuilding Labor Adjustment Board.

During the war, the standard of living and earnings became in a very vivid manner the interest of every one, and a matter of public knowledge. Wage adjustments were frequent, and turned on the standard-of-living issue, so that never before had the standard of living been given so much consideration as a wage factor.

Since the war, however, and particularly since the recent fall in prices beginning in the summer of 1920, living costs have almost dropped out of discussion, and similarly their use in setting wages. Wage earners, and particularly their chief spokesmen, the skilled workmen, said little about the cost of living, because since they argued for increased wages when prices were rising it might be expected that they would take a reduction in wages when prices were falling. Employers, who in general have never shown enthusiastic interest in cost-of-living statistics, particularly in budget details, have tried very little to base their wages on the standard of living. With the pressure of rising prices removed, the public has not been so much interested.

While the interest in the standard of living as a factor in wage adjustments has greatly declined, it is thought that this shift in interest is only temporary, partly occasioned by falling prices. Because of the belief that this lack of interest is temporary and that the standard of living will in the future be considered more important as a factor in wages, I wish to comment briefly on certain outstanding experiences which have resulted from its use during the past four or five years.

In the first place, I should like, by way of introduction, to recall to your mind the more or less generally accepted idea of the relation of the standard of living to wages. This relationship is, briefly, a matter of social policy. According to the prevailing theories of wages, wages are determined by supply and demand, working out through determination by means of marginal productivity, in which

process bargaining plays a more or less important part. These forces that set wages can be affected by social policy, just as prices, although determined by certain forces of supply and demand, can be influenced by monoply or the tariff. For instance, if all industries not now paying a living wage were required to do so or cease activity, the result would, of course, affect supply and demand, and the productivity per unit of labor would be raised. Such a result might occur through a reduction of supply, or through increased efficiency of management, or, in the case of low-paid workers, through an increase in physical efficiency. These processes are familiar to you; I only want to recall to you that wages can be paid on the basis of the standard of living, if public policy so determines either through legislation or the mores.

I think it can be said that during the war public policy did try to regulate wages on the basis of living costs. This experience showed that at that time the consideration of the standard of living as a basis of wage settlements was practical, but this experience also showed that the application of the standard-of-living factor to wage settlements involved a fairly complicated technique, which was not always clearly understood. It seems desirable at this time to pass in review a few of these points about which there is a confusion, as judged from our recent experience, in the interests of facilitating the use of cost-of-living figures in future wage adjustments.

In the recent wage adjustments in the coal industry and in the railroad industry, it was quite evident that there was much confusion in the mind of the public over the standard-of-living budgets. This confusion arose from the fact that there are several different levels of living and not just one standard of living. Two of these levels of living have been particularly well studied. They are the minimum-subsistence level and the minimum-comfort level. The minimum-subsistence standard of living is supposed to provide just a bare subsistence. It can be determined in terms of death rates, sickness rates, and calorie needs. It is that wage that is thought of when we speak of requiring industry to pay a living wage and say that otherwise it is parasitic and ought not to be permitted to exist.

So drastic a policy has never been urged for the minimum-comfort wage, however desirable it may be socially to raise the standard of living. Condemning an industry for not paying a living wage depends upon what living wage, whether the minimum-subsistence wage or some higher level, is meant. Very frequently the minimum-comfort wage has been erroneously called the minimum-subsistence wage.

Another use of standard-of-living figures that has made it seem impractical is the tendency to apply standards worked out in one locality to another and different locality. It is frequently said that

it costs a certain sum for a family of five to live in the United States today. There is, of course, not just one single cost for the United States. There are many, varying from locality to locality.

Just how great a variation there is between different regions cannot be told without special investigation. But from the data collected by the United States Bureau of Labor Statistics from all regions of the United States, the difference in cost of living according to sections of the nation appears to be slight; perhaps it is a little lower on the Pacific Coast.

The variability is somewhat greater, however, by size of the particular locality. The cost of living in the very large city is not greatly different from the cost of living of the large city. But there seems to be a good deal of difference between the cost of living in the large city and in the small town or village. We have very little statistical data concerning cost-of-living standards on the farm. But whatever these differences may be, it should be remembered that there are these variations. The best way of finding out is by special cost-of-living surveys, but of course those are expensive and take time. It is quite possible, I think, for some such agency as the United States Bureau of Labor Statistics to establish differentials according to locality which would very probably be stable over time. In lieu of such differentials, a very useful and practical device has been to take some standard quantity budget and price it in different localities, making such variations here and there in the budget as are found necessary according to custom, climate, and other factors.

When an industry extends over many different localities, variations in levels of living present obstacles to uniformity in wages, if the standard of living is taken as a basic factor. There is, however, such a thing as regional wages.

A third source of confusion in the technique of using standards of living in setting wages has been the failure to differentiate between the two concepts, actual budgets and standard budgets. Actual expenditures are sometimes called the plane of living, while standards of expenditure, showing what ought to be spent to get a bare subsistence or a minimum of comfort, are called standard budgets. It is, of course, easy to see that what a family spends may be less than a minimum of subsistence, although the Railroad Labor Board seems to have been confused on this point. At the minimum-comfort levels, the failure to differentiate between actual and standard budgets has been greater than at the minimum-of-subsistence level.

It has frequently been asserted that the standard budgets are too high, that families can and do live on a smaller amount. This assertion is in part due to the fact that a minimum-comfort *standard* is compared with a minimum-of-subsistence *plane* of living. I am in-

clined to think that there is more danger of a minimum-of-subsistence standard being set too low rather than too high.

The reason is this. Framers of standard budgets at the minimum-of-subsistence level tend to estimate standards for each separate segment of a budget, as for instance, for food, for clothing, for rent, for fuel and light, and for certain miscellaneous expenditures. They then add up these standards. If this is done, the separate standards add up to some sum, say $1300. But does it follow that $1300 will actually be spent by the wage earner's family in the same proportions that the framers allow? There is a tendency for standard budgets so made to minimize the miscellaneous expenditures. There is much evidence to show that workers' families will go without the necessary food, clothing, and warmth in order to get recreation or purchase services or goods that have to do with social standing.

For instance, in Chicago,[1] in the latter part of 1918, families of husband, wife, and three children aged 2, 5, and 11 years did not buy food yielding as much as 3500 calories per man per day until the total expenditure was $1800 a year. Standard budgets recommend 3500 calories per average adult male wage earner; yet a standard minimum-of-subsistence budget for Chicago in the latter part of 1918 would surely have been set at less than $1800 by several hundred dollars. (With $1600 families of this size bought an amount of food yielding 3300 calories, and with $1400 they bought food yielding 3100 calories.) Of course, in setting wages according to standards of living, we must not assume the families to possess superhuman will power or extraordinary rationality. We must take human nature as we find it. We should not forget that desires for recreation and social approval are just as integral a part of our legitimate desires as is the desire for bread. For these reasons, it is thought, any error that may be found in minimum-of-subsistence standards is likely to make the standard too low rather than too high.

A fourth practical difficulty in using the standard of living as a basic factor in wage settlements is the adjustment to the varying composition in sex, age, and family of the working-class population of a particular plant. Standard budgets are customarily drawn for a family of five. Employers have at times argued that their wage earners' families are smaller averaging, say, two children per family. The theory back of the selection of three children as a standard average is, however, more or less irrelevant, except, of course, in broad limits, of the actual number of children in a family, in very much the same way that the standard minimum-of-subsistence wage is more or less irrelevant to the actual wage received. Public senti-

[1] William F. Ogburn, "A Study of Food Tests in Various Cities," *Monthly Labor Review*, August, 1919.

ment has, however, supported the family-of-five standard, since in order that the race may maintain itself two children must grow to maturity, marry, and in turn bear children. Three children are simply a recognition of the undoubted chance of death, of non-marriage, and of infertility. Actually the average number of children at any one time in workingmen's families is not far removed from five, as has been shown by Miss Stecker.[2] It may be true that the children of a wage earner are not all of or under school age, but the excellent researches of Rowntree indicate that the inclusion of children of a young age does not unduly swell the budget because of other obligations and dependents not allowed for in these standard budgets. But of course it is very easy to scale down or up a standard budget according to variations in the size of the family if a situation is found to warrant it. In industries where very young men only are employed, or where unmarried men are the rule, or in industries where large proportions of women are employed along with men, it may be necessary to make some special adjustment.

In concluding these comments on certain practical difficulties which recent experience has uncovered, in the application of budget data to wages, I should like to point out the great desirability of having more studies and researches made on the standard of living so that the material will be readily available. The United States Bureau of Labor Statistics has continued its excellent war-time practice of supplying at short intervals the index numbers of the cost of living as measured in items of the family budget. It would be very desirable if this Bureau would also continue its standard-of-living work, making further researches and bringing up to date estimates of standards.

I have now reviewed the outstanding difficulties found by several years' experience in the use of cost-of-living data in setting wages. These difficulties have not been found to be serious, certainly not serious enough to account for the diminished use of the standard of living as a factor in setting wages. The real reason why there has been a diminishing use of standard-of-living data seems to have been the business depression and falling prices. But falling prices and a business depression, however, do not justify a lack of interest in the standard of living. Of course, if the cost of living falls faster in a business depression than wages, as I think is customarily thought, then there is a rise in the standard of living and no undue concern exists for those interested in human betterment. But there is evidence that, contrary to common assumption, wages have fallen farther than the cost of living, and hence there has been a lowering of the standard of living.

[2]Margaret Loomis Stecker, "Family Budgets and Wages," *The American Economic Review*, September, 1921.

Let us look into the evidence. The cost of living reached its peak in June, 1920, approximately. By September, 1922, it had fallen on the average for the 32 cities for which we have data 23 per cent, according to the index number of the United States Bureau of Labor Statistics, and 24 per cent according to the estimates of the National Industrial Conference Board. The cost of living has therefore fallen about 25 per cent less, it is noted, than wholesale prices or retail prices of food.

It is difficult to get good measures of the decline in wages. According to the published figures of earnings in New York factories, the present earnings of \$25.71[3] per week in September, 1922, are a decline of only 11 per cent from the peak. Their greatest decline has been 15 per cent.

In Wisconsin factories, the decline in average weekly earnings was greater than in New York, their maximum decline being 29 per cent, and in September, 1922, they were 24 per cent lower than their peak. Weekly earnings in factories in Wisconsin have fallen more than the cost of living there. The data for New York and for Wisconsin are for all types of labor.

As to union labor in the skilled trades, their wage rates have not fallen as much as the cost of living. The rates of wages for the principal organized trades in the large industrial centers had by May, 1922, as reported by the United States Bureau of Statistics, fallen only 6 per cent, while the cost of living by that time had fallen over 20 per cent. It is somewhat questionable how representative the wage rates are of earnings. We think earnings even in the unionized trades must have fallen more. Still the union wage rates for the unionized trades had fallen less than the cost of living by May, 1922.

However, the standard of living is of more social concern in connection with the lower-paid, unskilled labor. Mr. Burgess,[4] of the Federal Reserve Bank of New York, has worked out an index of average weekly earnings of common labor in Federal Reserve District No. 2. His figures show that the weekly earnings of common labor had fallen 29 per cent by January, 1922.

The United States Department of Commerce publishes the hourly rate of common labor employed by the United States Steel Corporation, and from these figures we find common labor hourly wage rates have fallen 29 per cent.

It therefore appears that the real wages of common labor, as measured by their rate of earning in terms of what can be bought,

[3] This figure is high because of increased earnings in railway repair shops as a result of the strike and because of the high seasonal wages in the clothing trades.

[4] W. Randolph Burgess, Index Numbers for the Wages of Common Labor, *Journal of the American Statistical Association*, March, 1922, p. 101.

have fallen since June, 1920; for the rate of earnings has fallen 29 per cent, while the cost of living fell only 23 per cent. It should be noted in passing that it has in the past been customary to compute changes in real wages by comparing the change in money wages with wholesale prices, or with monthly retail food prices. By this method we find wholesale prices have declined 38 per cent and retail food prices have declined 36 per cent, while the rate of earnings of common labor has declined only 29 per cent; therefore according to this method real wages have risen, some 15 per cent on the basis of wholesale prices and 11 per cent on the basis of retail food prices. But in reality, that is, when money wages are contrasted with cost of living, real wages have declined 9 per cent.

There are therefore large numbers of wage earners whose standard of living has fallen. Their standard of living has fallen more than the figures of rate of earnings indicate, since the yearly earnings from wages is less now than when wages were higher, because of the unemployment and irregularity of employment, and lack of bonus and overtime.

Although the standard of living is not being considered very much in the midst of the liquidation of labor during a period of falling prices, there is evidently need that it should be considered because of the decline in the standard of living that has taken place, particularly among the families of unskilled labor.

We do not, of course, realize in social values nor appreciate the human significance of a fall in the standard of living of the most poorly paid laborers. I would like to call your attention, however, to what has happened to the families of certain poorly paid laborers when their standard of living fell. In the winter of 1917-18, Dr. Harris,[5] of the Department of Health of New York City, made a survey of 2000 families whose standard of living had been reduced, and his data show what happens when real wages fall and how the family meets the problem.

Of Dr. Harris' 2000 families 9 per cent[6] sought charity for the first time. In 9 per cent of the families, women sought work for the first time; 18 per cent of the families went into debt as a direct result of the lowered real wages; 6 per cent took in boarders, never having taken in boarders before; 2000 cases of illness were recorded, an average of one per family; 13 per cent of these cases of illness were definitely retarded because of the low standard of living; 37 per

[5] L. I. Harris, "Some Medical Aspects of the High Cost of Living," *The American Journal of Public Health*, July, 1919.

[6] While I give Dr. Harris' data in percentages, the numerical terms are not of interest to us here as measures of degree, because we do not know relatively how much the standard of living had fallen for his 2000 families in comparison with the fall in the standard of living of common labor during the past two years.

cent of the families eliminated meat from their diet, and in 17 per cent more the amount of meat was reduced. In 40 per cent of the families eggs were eliminated from the diet; in 30 per cent, butter; 6 per cent gave up sugar; and, what is perhaps worst of all, 300 families gave up bottled milk, because of the fall in real wages. It seems very probable that when the standard of living of poorly paid laborers is lowered, sacrifices and adjustments follow somewhat the lines recorded by Dr. Harris in his data of 1917-18.

Even greater need is shown for considering the standard of living if we approach the problem from the point of view of what is a subsistence wage. I do not know what is a subsistence wage at the present time. Practically no valuable standard-of-living studies have been made since 1918 or 1919. I should guess that the minimum-of-subsistence standard would be for New York City today in the neighborhood of $1300, and very nearly the same for Chicago. Miss Lucy Gillett, of the New York Association for Improving the Condition of the Poor, has secured prices of a minimum food budget as of December 1, 1922, in New York City, and finds that such food cost $10.39 a week, or at the rate of $540 a year. Such an allotment of food gives adequate nourishment for a family with three children under working age, provided they follow detailed instructions and buy as the Association for Improving the Condition of the Poor says to buy. If a family does not follow instructions, Miss Gillett thinks such an adequate allowance of food would cost $600 or more. If food be considered 43 per cent of the total budget, then the minimum subsistence budget in New York in December, 1922, must be nearly $1400 a year. In many other regions and localities of the country this level would be somewhat lower.

We know common labor is hired today in the northeastern part of the United States at about 37 cents an hour. But of course this does not tell us what the annual earnings are. The annual earnings might conceivably be as high as $1100 a year. At one time in the summer of 1921 the rate of wages of common labor in the United States Steel Corporation plants went as low as 30 cents an hour, which would mean at maximum employment about $900 a year. Chairman Hooper, of the Railroad Labor Board, has estimated the average earnings of the maintenance-of-way men to be 32.7 cents per hour which, it has been variously estimated, would mean only $800 a year or thereabout. Mr. Burgess' studies of earnings of common labor showed for January, 1922, average weekly earnings of $18.06. At 50 weeks' employment per year, common labor in the second Federal Reserve District would earn only $900 a year.

In regard to women's wages, the most comprehensive data come

from the studies of general industries in certain states by the Women's Bureau of the United States Department of Labor.

These reports show that one half of the women working in Kansas in 1919-20 received less than $11.80 a week; in Georgia one half received less than $12.20 a week in the winter of 1920-21, in Rhode Island the median wage was $16.85 in the fall of 1920; and in Kentucky in the fall of 1921, the median wage was $11.05. In Missouri, the median earnings were (May-June, 1922) $12.65 a week; in South Carolina (fall, 1921) $9.55; in Alabama (fall, 1921) $8.80; and in Arkansas (spring, 1922) the median weekly earnings were $11.60. The fact that half of the women engaged in industry in these states received less than these median wages means that many must be receiving less than a minimum wage, although we do not know definitely what the living wages are in these states. In general, the minimum wage boards in states with minimum wage laws for women have in force today minimum wages at figures varying from $12.00 to $16.50 a week.

It appears from these comparisons that large numbers of wage earners are not getting a living wage. The question naturally arises as to how they live if they do not get a living wage. Judging from the recent pronunciamento of the Railroad Labor Board on the living wage, there is current the opinion that any wage which workers work for is a living wage, since in order to work they must be alive.

The answer is that workers trying to live on less than a living wage do not live on it. It should be remembered that the wage is for the family as well as the wage earner. In the first place, the family income is sometimes a little larger than the earnings of the chief wage earner, perhaps 10 per cent greater on the average. This may have undesirable social consequences for the family and the children, but it does add something to the amount to be spent. But even 10 per cent added to the average earnings of common labor probably in many cases does not bring it up to a bare subsistence standard of living. Furthermore, not all unskilled laborers are married, nor do all have three children.

Although the chief wage earner of a family may live, it does not follow that this is true of the family. There is some evidence to lead us to think that poverty falls the least hard on the husband and harder on the wife. The only records of expenditure for which we have individual accounts is clothing, and when the standard of living falls, standards of clothing of the wife are sacrificed before the standards of clothing of the husband.

Besides, living and death are not determined by the heart beat. Customarily we say if the heart beats one lives, if not one is dead. But there is such a thing as deterioration and sickness that make death more probable. I have already referred to the high sickness rate

found by Dr. Harris in his survey. Inferior feeding also leads to deterioration. The idea of the living wage is that of maintenance, and, in the case of children, of growth. Boas has shown that children of poor parents on the average are smaller than children of well-to-do parents and their rate of growth is definitely retarded. The fact, therefore, that a wage earner lives and works is not proof of the fact that his family is living. Nor is it proof of the fact that he is not deteriorating more rapidly than the normal process of decay.

The fact that families do not live on less than a living wage is very well shown by the infantile death rate studies of the Children's Bureau of the United States Department of Labor. Woodbury has published the infant mortality rate, for eight cities, according to the earnings of the father. The highest rate is 157, for families where the father earns $450 or less a year. The figures of income are pre-war figures; $750 now will buy what $450 bought then. The death rate decreases more or less continuously as the earnings of the father increase. The rates for the graded income classes fall as follows:

$ 450 or less	156.7
450 to 549	118.0
550 to 649	108.8
650 to 849	96.
850 to 1049	71.5
1050 to 1249	66.6
1250 to 1449	64.0
1450 to 1849	86.3
1850 to	37.2

We see, therefore, that at the very low income groups the death rate for infants under one year is extremely high. We know the correlation of the general death rate with the infant mortality rate is about 0.8 and we think that the health and disease rate is closely correlated with the death rate. Dr. Woodbury's data suggests the possible adoption of a new nomenclature. We might call certain low earnings a dying wage, instead of a living wage.

We have shown that during the phenomenal rise of prices of 1916-20 the standard of living came to be considered a most important factor in setting wages; but that with the fall in prices since the summer of 1920 the standard of living has been largely neglected in such considerations. The effect has been a fall in the standard of living of those least able to bear such a fall, with a result that a large number of unskilled laborers are trying to live on less than a living wage and that the standard of living has probably been lowered for some skilled workers.

For a country with a per capita annual income of around $500 per year, such a policy is all the more unjustifiable. While there may be forces connected with the business cycle that tend to make the standard of living an important factor in wages during pros-

perity, and that tend to minimize the standard of living as a factor during a depression, it seems unnecessary and deplorable that the standard of living should be so neglected during a business depression.

There is no question that our industries could pay a living wage. The recent report of Secretary Hoover's Committee on Waste in Industry showed a percentage of waste in six of our major industries varying from 29 per cent to 64 per cent. Even if the added payment in wages in consideration of the standard of living should not come out of profit, there is certainly abundant opportunity for such a raise in wages to be met through the elimination of waste, which amounts on the average to about 40 per cent. Of this waste, more than 50 per cent is due to the fault of management and less than 25 per cent to labor. The most efficient plant in an industry is usually two or three times as efficient as the average plant.

The issue of the standard of living and wages is largely an issue of social policy. It seems wholly desirable that all wages below a bare subsistence level should be raised at least to the subsistence level and that in time the standard of living for all wage earners be progressively raised.

It would, of course, be possible to enact state minimum wage legislation which should apply to adult males, just as there are now in some states minimum wage laws for women. There is, however, no practical movement toward this end in the United States at present.

On the other hand, it is possible for public sentiment regarding the importance of standard of living as a factor in wages, by becoming strong, to affect arbitrators in decisions, to affect the bargaining strength of wage earners. It is conceivable that appreciation of the standard-of-living factor may become so strong as to become part of the mores, just as anti-slavery or monogamy is a part of the mores. It would, of course, take some time for the standard-of-living idea to become strongly implanted in the mores. But certainly to the extent that public sentiment supports the idea, to that extent will it come to affect the wages set in negotiations and arbitrations.

While it is probably true that with the upward trend of the business cycle the public attitude toward a consideration of standards of living is favorable, and that with the downward trend of the business cycle public opinion on the matter is indifferent, still it would be most unfortunate to have as much lost on the downward curve of the cycle as is gained on the upward curve. If public opinion be aroused in favor of considerations of standards of living in periods of depression, then not so much would be lost as was gained when the cycle was moving upward, so that the long-time trend of sentiment in favor of considering standards of living would be upward.

THE PRODUCTIVITY FACTOR IN WAGE DETERMINATIONS

By George Soule
New York City

We are all familiar with the metaphysical discussions which attempt to separate the productivity of labor from the productivity of land, of capital, of management, of the inventor. There are some who would contend that labor is responsible only for that part of production which the worker with his bare hands could accomplish if there were no machinery, and from this minimum—which in the case of most modern products would amount to an absolute zero—the contentions range to the position that labor alone is ultimately responsible for all production. As exercises in the realm of morals such speculations may possibly be useful, but as guides to the proper distribution of the product they are quite without meaning, because they are not subject to scientific analysis and quantitative measurement in a living economic world. The situation which we face is rather one in which numerous elements coöperate to produce unit articles of goods which could not be had if the help of any element were withdrawn; and the task which we have is to distribute these indivisible articles to the best advantage of the community as a whole, and with the utmost possible fairness to its several parts. I do not intend to beg the question of what constitutes "possible fairness," but I believe that the answer to it can best be derived, not from *a priori* abstractions, but from an examination of the changes which actually take place in production and distribution. The aim of this paper is to inquire into the relationship between national productivity and the movement of basic or average wages.

Incidentally, we are not concerned here with methods of varying rates of pay according to the relative productivity of individual workers. This is a subject having to do with technical devices adopted to increase the profits of individual firms, and, while it is an important realm of technology, the methods in question do not necessarily affect the distribution of the national income or the average incomes of wage-earners. It might be possible, so far as we know without going outside the consideration of such technical devices, to adopt perfect systems of varying rates of pay according to productivity, without ultimately adding anything to real wages.

I

The subject of the relationship between national productivity and real wages has a direct bearing on wage determinations, because it involves the application of a modern academic theory of wages and

the validity of several arguments or "principles" recently invoked in wage adjustments.

The academic theory in question is the explanation of the distributive process known as the theory of marginal or specific productivity. My hearers are undoubtedly familiar with this varied and intricate theory, and so I shall not attempt to summarize it except by saying roughly that it contends that there is a close relationship between what each group engaged in production contributes to the national grab bag and what it receives back.

The other arguments referred to are of a more popular nature, and are usually found in propaganda representing special interests or in the proceedings before wage arbitration boards.

There is the argument that the standard of living of the wage-earners increases with the efficiency of the modern productive process, and that if the workers want higher real wages they should buckle down and work harder instead of asking for higher money wages or striking or restricting production in other ways. This argument usually embraces the contention that real wages cannot be increased by any other method than by an increase in national productivity.

There is the argument that wages should be adjusted up or down in direct ratio to a cost-of-living index. This is usually advanced by wage-earners in times of rising prices to prevent a decrease in real wages, and by employers in times of falling prices to prevent an increase in real wages.

There is the argument, akin to the first-mentioned, that the real wages of one group of workers can be increased only at the expense of another group of workers, and that if such a readjustment occurs it creates an abnormal relationship in the fabric of wages and prices, and so prevents the arrival of general prosperity.

There is the argument that, the national income being what it is, there can be no marked or general increase in real wages, because such an increase would necessitate an increase in the national income. This argument, together with the preceding one, has recently had a wide vogue, and was sanctioned by the United States Railroad Labor Board in its last wage decision, in which it attacked the principle of the living wage.

The subject also has a bearing on the reasonable expectations of wage-earners under the present economic order, and hence on the desirability of maintaining this order unchanged from the point of view of the wage-earner. Marxian Socialists, for instance, contend that under the present order real wages have a tendency to fall, and cannot be increased. In this contention they are at one with those who argue that money wages should not rise more rapidly than the cost of living, and with those who argue that real wages cannot be increased

without disaster to the economic fabric. Such arguments, it will be noted, are incompatible with the theory that real wages do increase with a growth in productivity. We shall, I believe, find light on these various contradictory assumptions only by a quantitative investigation of the facts.

II

What are the facts about national productivity and real wages? In an article in the *Annals of the American Academy of Political and Social Science* last March I presented an elementary study of the relationship between them. The data there brought forward were subsequently checked over and augmented by Dr. Willford I. King of the National Bureau of Economic Research, and the results of Dr. King's work were presented in an article in the *New York Evening Post* of June 7, by Dr. Wesley C. Mitchell. The data on wages and the shares of the national income received by various groups of producers up to 1919 depend chiefly on these two sources, and I shall take the liberty of including this matter as it fits in the present discussion without further apologies for recounting an old story or further acknowledgements of the highly valuable contributions made by Drs. King and Mitchell.

Several studies of the course of the physical production in the United States, not including a complete list of products, but nevertheless on a wide basis of fundamental data, have been independently made, notably by Professor Walter W. Stewart, late of Amherst and now of the Federal Reserve System, and Professor Edmund E. Day of Harvard. These studies agree substantially with each other. Dr. Day's index indicates that between 1899 and 1920 production of all classes of commodities increased from 64.6 to 117.0, the base, or 100, being an average of production for the years 1909 to 1913. This is an increase of about 80 per cent for the 22 years. During the same years manufacturing production alone increased at a slightly higher rate, or from 58.4 to 115.0. The population during these years increased from about 75 millions to about 105 millions, or about 40 per cent. Thus it is clear that total production increased about twice as rapidly as the population between 1899 and 1920, and that manufacturing production increased at a rate even slightly higher. If we divide the index of production by an index of population, we find that production per capita of the population increased from 84 to 107, or about 28 per cent, and that manufacturing production per capita of the population increased from 76 to 105 or about 39 per cent.

INDEX OF PRODUCTION PER CAPITA[1]

1899–1920

Physical Production, Av.–1909–1913 = 100

Year	Agriculture	Mining	Mfgr.	Agri. Ming. and Mfgr. Combined weighted according to values in 1909	Population Index Millions 1913=100		Production per Capita of Population Total	Mfgrs.
1899	80.4	48.5	58.4	64.6	74.69	77.1	84	76
1900	80.9	51.3	59.0	65.6	75.99	78.5	84	75
1901	71.8	55.6	65.6	66.9	77.59	80.1	84	82
1902	91.4	59.5	72.1	77.3	79.19	81.8	94	88
1903	84.4	65.5	73.3	76.4	80.79	83.5	92	88
1904	93.3	66.1	71.9	78.5	82.39	85.1	92	85
1905	94.5	78.4	84.3	87.3	83.98	86.8	101	97
1906	100.5	82.4	90.5	93.3	85.58	88.4	106	102
1907	90.4	90.2	91.3	90.9	87.18	90.0	101	101
1908	95.5	74.8	77.5	83.3	88.78	91.7	91	85
1909	95.0	91.9	95.4	95.0	90.37	93.4	102	102
1910	99.1	97.8	96.9	97.8	91.97	95.0	103	102
1911	94.1	94.3	92.4	93.6	93.57	96.7	96	96
1912	110.0	105.1	105.9	107.6	95.17	98.3	109	108
1913	98.2	110.2	109.2	105.2	96.77	100.0	105	109
1914	108.5	98.3	100.1	102.9	98.36	101.2	102	99
1915	113.4	110.4	109.3	110.8	99.58	102.4	108	107
1916	100.4	129.5	127.7	117.2	100.80	103.6	113	123
1917	108.5	134.5	125.6	119.8	102.02	104.8	114	120
1918	107.1	135.6	125.0	119.0	103.24	106.0	112	118
1919	110.6	110.8	114.0	112.5	104.46	107.2	105	106
1920	118.0	128.0	115.0	117.0	105.71	109.2	107	105

It is thus clear that, over a considerable recent period concerning which fairly complete and accurate data are obtainable, the national product increased so much more rapidly than the population that each man, woman, and child in the country might have received from 30 to 40 per cent more goods per year at the end of the period than each one received at the beginning. If we smooth out the fluctuations of production incidental to the business cycle, we find that the average per-capita increment to national production was slightly under 2 per cent a year. This means that the real wages of all wage-earners might have been increased at the rate of a little less than 2 per cent every year, or between 30 and 40 per cent for the period in question, while the real incomes of all other persons were being increased in like proportion. This includes, of course, incomes classified under the heads of land and capital.

To put the matter in another way, every person in 1899 received a a certain share of the national product. We need not question here whether that sharing was just or proper; we know only that it existed and hence was possible. Now if every one had continued to

[1]Using Edmund E. Day's "Index of Physical Production," Harvard University Committee on Economic Research.

receive the same share year after year, each person's real income would have increased as the national product per capita increased. If wage-earners, for instance, had continued to receive the same per-capita share of the national product year after year, average real wages would have increased in direct ratio to the increase in per-capita production, and this without any relative loss to the shares of other classes of the population or to land and capital. What, as a matter of fact, happened?

III

Before the period above mentioned we have only data of the most general nature—production figures of pig iron, for instance, wage rates in some occupations, an index of retail food prices. In general it seems reasonable to suppose from what we know that both production and real wages increased between 1870 and 1896. We have not enough data to make possible a detailed comparison between the two factors in this earlier period.

All studies of the subject, however, indicate that real wages began to fall about 1896 and continued to fall up to 1914 and perhaps for two or three years more. The most comprehensive and satisfactory data from which to calculate the trend of wages come from the U. S. Census of Manufactures. These are not open to numerous objections which have been made to such studies as those of I. M. Rubinow and Paul Douglas, which utilize wage rates in large measure and cover only part of the field. The Census of Manufactures covers all wage-earners in factories, and it gives the material for calculating annual earnings instead of wage rates, thus including the effects of part time and seasonal unemployment. It has been, to be sure, compiled only every five years and thus misses much of the fluctuation of the business cycle, but over a period of twenty years we ought to be able to discover a trend within reasonable limits even from five-yearly data. An index of real wages, made by comparing the census figures with the index of retail food prices, shows the following result, if we tage 1889 as the base:

INDEX OF REAL WAGES (IN FOOD)

1889	100
1899	99
1904	99
1914	89
1919	98

Thus, while per-capita production was increasing more than 30 per cent, real wages first fell 10 per cent and then recovered to a position slightly below the levels of 1889 and 1899. It is thus evident that wage-earners not only did not receive the same share per capita

of the increased product year after year, but actually were receiving at the end of the period slightly less goods than at the beginning. If real wages had increased in direct ratio to the increase in per-capita production, the index number of real wages in 1919 would have been nearer 140 than 98.

The index of retail food prices was used in arriving at these figures because it is the only good index of retail prices we have over the whole period. It may not be closely indicative of the trend of the cost of living as a whole, but since food occupies nearly 40 per cent of the wage-earner's family budget, we are justified in assuming, I think, that the error is slight before 1914. It certainly is not large enough to invalidate the broad conclusion that the trend of real wages was quite different from the trend of productivity.

More detailed figures on the course of money wages and on the cost of living are available between 1914 and the present. It is well to examine these, not only to secure an index of real wages for 1920, 1921, and 1922, but to check up any error that may be involved in using the retail food index since 1914 when, on account of the disturbance of price relationships incident to the war inflation and deflation, food prices fluctuated more widely than other retail prices.

The best sources for money wages year by year since 1914 are the figures of average weekly earnings published by the states of New York and Wisconsin. Both cover a wide range of industries and a large sample of the factory workers of the respective states. That the movement of New York wages in particular may be considered closely indicative of factory wages throughout the country is indicated by the census figures, which show an increase of average yearly factory wages between 1914 and 1919 of 99.04 per cent for New York, and of 99.8 per cent for the nation. From the New York and Wisconsin state figures of weekly earnings a yearly index of money earnings was derived for each of the two states. The New York index was then deflated by the Bureau of Labor Statistics' index of the cost of living for New York City to derive an index of real earnings. The Wisconsin index was deflated by the cost-of-living index for the United States, there being no city in Wisconsin covered by the Bureau. The two indices of real wages were then combined by giving a weighting of 5 to the New York series and 1 to the Wisconsin, this being about the ratio of the manufacturing populations of the two states. The only other state which has published reliable wage figures is Massachusetts, and this series was not available after 1920 at this writing. The combined New York-Wisconsin index of real wages was compared with an index of real wages computed from the Massachusetts figures up to 1920, and the two series were so nearly alike that their co-

efficient of correlation was +.937. It may therefore be inferred that the New York-Wisconsin index of real wages based on the cost of living from 1914 to date is at least close enough to the facts to be given serious consideration in a broad discussion of this nature. The series is as follows:

INDEX OF REAL WAGES (COST OF LIVING) FOR NEW YORK AND WISCONSIN

1915	101.7
1914	100.0
1916	102.2
1917	93.5
1918	96.6
1919	101.2
1920	110.1
1921	114.7
1922 (10 mos.)	117.3

This would indicate an increase in real wages of about 17 per cent between 1914 and the present year. If we join this new series with our former series derived from the census, however, and reduce it to the base of 1889, we find that real wages at present have increased only a little over 4 per cent above 1889, or about 5 per cent above 1899. The index number on the 1889 base is 104.4.

Thus, even taking into consideration the recent rise in real wages, due chiefly to the more rapid drop of prices than of wage rates since 1920, we have only a 5 per cent increase in the per-capita purchasing power of factory wages to compare with a 30 or 40 per cent increase in per-capita production in the last twenty-five years. Making the utmost possible allowance for error in the real wage figures, it is hardly conceivable that this gap would be bridged.

IV

What became of the augmented production of physical goods between 1899 and the present which wage-earners failed to receive? The first thought is, naturally, that they may have gone to other elements engaged in manufacturing. Both the Marxian and classical economists, having in mind the great increase in productive capital, might expect to see the share of profits and interest enlarged. The census figures, however, seem to prove that this is not the case, at least to any great degree. If we calculate the percentages of "Value Added by Manufacture" which were paid in wages, in salaries, and in the margin which went for profits, interest, depreciation, and miscellaneous expenses, we find that wages very nearly if not quite held their own, that salaries increased somewhat, and that the property

interest decreased slightly. Dr. King's emendation of my table on this point is as follows:

Year	Wages	Salaries	Profits, Interest, Depreciation, Rent, and Miscellaneous
	Per Cent	Per Cent	Per Cent
1889	44	8	48
1899	42	8	50
1904	41	9	50
1909	40	11	49
1914	41	13	46
1919	42	12	46

My first suggestion was that the extra products were absorbed by those engaged in the distributing process, and by the "overhead" trades or those not engaged in the production of physical goods. This inference is made reasonable by the fact that retail prices before the war seem to have risen more than wholsale prices. Between 1899 and 1914, for instance, retail prices of food increased 50 per cent, while wholesale prices of food increased only 37 per cent. Unfortunately we have no other good series of retail prices to compare with wholesale prices before 1914. The same inference is indicated by the rapidly increasing percentage of the population engaged in trade and finance, the numbers in such occupations having grown from 6.4 per cent of the gainfully employed in 1890 to 10.2 per cent in 1920. The evidence, however, is inadequate on this point, and although it seems probable that the merchants, bankers, advertising men, and the like have in part been responsible for absorbing the addition to the national income lost by those engaged in manufacture, they could hardly have absorbed all of it.

Dr. King is responsible for the data which appear to show that the bulk of the increase in production went to those dependent on agriculture for their livelihood. On the basis of his estimates of the national money income, he finds that the share of the total income of the United States going to those engaged in agriculture increased from about 13 per cent in 1889 to about 20 per cent in 1918. During the same period, the share of the total income going to those engaged in manufacture fell a little and then increased slightly, or from about 26 per cent in 1889 to about 29 per cent in 1918. The percentage of mining income showed only a slight increase, while transportation fell slightly.

Meanwhile the number of persons engaged in agriculture had not increased nearly so rapidly as the numbers engaged in the other occu-

pations. And so the larger share of income which agriculture received was divided among a smaller percentage of the gainfully employed population. From these figures it is difficult to avoid the conclusion that the per-capita real income of those engaged in agriculture rose so rapidly between 1899 and 1919 as to absorb most of the increment to national production which, as we have seen, was not shared by factory workers. Dr. King's tables on these points are here repeated for the convenience of the reader:

PERCENTAGE OF THE TOTAL INCOME OF THE UNITED STATES

	1889	1899	1909	1918
Attributed to value product of—				
Agriculture	12.8	14.1	16.2	20.4
Mining	2.5	3.1	3.1	3.3
Manufacturing	25.6	23.1	23.5	29.4
Transportation	10.4	9.2	9.6	8.7
Total	51.3	49.5	52.4	61.8

PERCENTAGES OF TOTAL NUMBER OF PERSONS HAVING GAINFUL OCCUPATIONS

	1890	1900	1910	1920
Attributed to				
Agriculture	39	36	33	26
Mining	1.7	1.9	2.4	2.6
Manufacturing	18	18	22	27
Transportation	4.7	5	6.2	7.4
Total	63	61	64	63

It would be improper to infer from these figures that the increase in the average per-capita agricultural income was wholly reflected in the prosperity of actual working farmers. If we bear in mind the enormous increases in the value of good farming land, and the large number of tenant farmers and farm mortgages, we must conclude that a great part of this new income did not bring full benefit to actual tillers of the soil.

The drastic fall in agricultural income in 1920 and 1921 coincides with the recent increase in real wages of factory workers. But it should be remembered that real wages have apparently not yet risen sufficiently to indicate that factory workers are receiving as large a per-capita share of the national product as in 1899. As far as their improvement of status is concerned, the agricultural real income per capita might still be more than 40 per cent greater than in 1899. If

the farmers are therefore suffering from extreme deflation, they should look elsewhere than to high wages for the cause. If the share of the national income now received by factory wage-earners is unwonted or "abnormal" according to the standards of twenty-five years ago, it is so only by virtue of being too small.

V.

A summary of the preceding sections shows that while the national per-capita product was increasing steadily (of course with minor fluctuations due to the business cycle) manufacturing wage-earners experienced the following four periods:

a) A period (between 1870 and 1896) about which little is known in detail except that real wages increased.

b) A period (between 1896 and 1914) in which real wages decreased. The new surplus of production, plus what the wage-earners lost, was absorbed in part by manufacturing salary earners, in part by the distributing and overhead trades, but chiefly by agriculture.

c) A period (between 1914 and 1919) in which real wages showed a net increase, but not increase enough to absorb any of the increase in per-capita production since 1899. During this period the real per-capita incomes of those engaged in agriculture increased as well.

d) A period (between 1919 and the present) in which real wages showed a more rapid rise than before. Measured from 1899, however, the present wage level does not show as great an increase as the increase in per-capita production during the same period. This recent rapid rise in real wages was accompanied by a rapid decline in agricultural income, and in the the per-capita income of farmers. Probably, however, the present share per capita of agriculture in the national income is still larger than in 1899.

During the course of each of the above periods there were fluctuations in wages.

VI

What bearing have these conclusions on the wage theories and arguments mentioned at the beginning of the study?

It is difficult to say without more data whether they tend to bear out the theory of marginal productivity. They do show, however, that under actual conditions this principle, if it is true, does not operate in any automatic way so as to bring about results which can be recognized as just or desirable. Were there any changes in the relative contributions of factory labor to the productive process which made it just that real wages should increase from 1870 to 1896, should decrease from 1896 to 1914, and should increase again from 1914 to 1922, though not in proportion to the increase in per-capita production? It does not seem reasonable to suppose so.

As to the argument that real wages do increase and can increase only by increasing productivity, and hence that wage-earners would

do well to concentrate on improved effeciency, the facts do not seem to establish any great reality for such an incentive. The connection between productivity and wages is not close enough to act as a stimulus. The most that can be said is that increased productivity enlarges the possibility of higher wages. Whether this possibility is to be realized evidently depends either on the blind play of economic forces, or on a higher degree of social control than has been exercised in the past.

The argument that money wages should be adjusted up or down in direct ratio to a cost-of-living index does not seem to be confirmed. Wages have not moved in any such way in the past. It is, to be sure, necessary that money wages should increase at least as rapidly as the cost of living, if real wages are not to fall. But it is neither desirable nor necessary that money wages should fall with the cost of living. If wage-earners are to benefit by increased productivity, money wages must increase more than the cost of living in the long run.

It is obviously not true that the real wages of one group of workers can be increased only at the expense of another group of workers. Such shifts in the distribution of the national income do, indeed, appear to occur. But it would be possible to preserve any given status of distribution by increasing the real incomes of all persons in direct ratio to the increase in per-capita production. The increase in productivity alone has been rapid enough to furnish substantial increases in income to every one, without robbing Peter to pay Paul. This is not to say that it might not be desirable to award a larger share of the national income to the wage-earners than in the past. No one has yet proved that the rate of capital accumulation, for instance, ought to be as rapid as it is, or that society benefits from large increases in agricultural rents. But we do not need to go into such questions to see that increases in purchasing power of wage-earners might reasonably keep even pace at least with increases in per-capita production.

Even if shifts in the distribution of the national income do occur, that fact by itself offers no assurance that a new basis of sharing may not arrive without upsetting any so-called "normal" balance of wages and prices. Where are we to look for such a "normal" year? In 1919? But that differed from 1914. In 1914? But that differed from 1899. Such a balance, as a matter of fact, has apparently not been preserved without change through any considerable part of the period we have had under consideration.

The argument that, the national income being what it is, there can be no general increase in real wages is erroneous, for the reasons stated above. If we mean by the national income merely an estimated total of dollars, such an estimate is arrived at by adding up the money in-

comes of individuals or groups, and the argument amounts to a meaningless mathematical identity. If we mean by the national income an annual total production of goods and services, that can and does increase, and might under proper control increase faster than it has in the past. Furthermore, readjustments in the distribution of this income have occurred and can occur in the future.

Finally, the evidence is not conclusive with regard to the desirability of the present economic order from the point of view of the wage-earner. It does not bear out the Marxian theory that real wages must fall, neither does it bear out the opposing argument that real wages must rise with technical progress. It would appear, nevertheless, that if the wage-earner is to receive a minimum of justice his share of the national income should not be diminished over any considerable period. If this end is to be achieved, average real wages must be increased at least in direct ratio to a smoothed index of national per-capita production.

Is such a goal beyond the power of conscious social control? The answer will depend in part on an analysis of the causes which lie behind the observed phenomena. It may be that there is a significance in the falling price level which accompanied the rise in real wages from 1870 to 1896 and from 1920 to 1922, in the rising price level which accompanied the drop in real wages between 1896 and 1914. It may be that there is a significance in the large volume of immigration between the nineties and 1914, and in the falling off of immigration between 1914 and the present. Perhaps the rapid increase in trade-union organization since 1914 is a factor. Possibly the processes of distribution can be organized more efficiently, or the national overhead can be decreased. The working farmers may find some way of reducing agricultural rents or interest. At any rate, those engaged in making wage determinations, so far as they hope to accomplish anything besides registering the aimless play of the market, may find the beginning of a guide for the use of reason in the course of national productivity.

FACTORS IN WAGE DETERMINATIONS—DISCUSSION

PAUL H. DOUGLAS[1]—While believing firmly in the living wage principle, I have come, within the last year, to doubt both the practicability and, under present conditions, even the desirability of paying every adult male worker that which the various exponents of the standard of living advocate, namely, an amount sufficient to maintain the man himself, his wife, and three dependent children below the age of fourteen. I believe we shall have to abandon this as a uniform minimum standard for two reasons: first, because it would probably absorb too large a share of the national income for industry to stand the strain, and, second, because such a family is not typical of actual workingmen's families.

Happily, there are a number of very interesting experiments which point the way out of the dilemma. In New South Wales, in France, Belgium, The Netherlands, Germany, and Austria a new system of minimum wages is rapidly coming to the fore—namely, paying men, not a fixed sum, but instead a variable amount graduated according to the number of children dependent upon them for support. Naturally, the details of these plans vary greatly. The essential principle behind them, however, I believe to be correct, and I wish to suggest the three chief features which should characterize any such system in the United States: (1) the payment of a basic minimum for all adult males sufficient to maintain either a single man living away from home or a married couple without children, (2) the granting of an adequate additional allowance for each additional dependent up to a limited number of children, and (3) the creation of a pool through which the allowances would be paid in order to prevent discrimination against the men with the larger families.

SAM A. LEWISOHN.—Neither Professor Commons' nor Professor Ogburn's paper was before me in advance and only an abstract of Mr. Soule's, and I shall not discuss Mr. Soule's paper in detail but merely deal with one or two features of it as emphasizing the two points upon which I shall touch; *one* being the relation of the national income factor to the living-wage factor, which Mr. Douglas has already mentioned; the *other* the relation of general wages to national productivity.

In arriving at his conclusions Mr. Soule has not, I feel, sufficiently emphasized the factor of immigration, which is a real complication and must very seriously affect any conclusion arrived at. I think this especially goes to Mr. Soule's questioning of the desirability of the present economic order from the point of view of the wage-earner. Indeed, the fact that *average* real wages had decreased would not necessarily indicate that the economic status of the workmen had deteriorated. The immigrants' living conditions may have been far worse abroad. Their condition may have improved, the position of the native workers may have improved, and yet average real wages may have actually decreased.

[1]Mr. Douglas sent an abstract only of his address.

Another factor which obviously we must keep in mind is that the portion of production that does not go to the pay of employees is not necessarily consumed by some Moloch called capital or distributor, but may be utilized, for example, to house and equip and provide producer's goods for the newly arrived immigrant. This complicates reaching any conclusion from the fact that real wages have not followed per-capita production.

I cannot follow Mr. Soule in his suggestion that there is no harm in the fact that the real wages of one group of workers increases at the expense of another group of workers, especially if the work and hazard involved are similar.

Without regard to the question of normal economic balance, high prices for any particular commodity or service so far as they are created by such disparity may be more than the traffic will bear and thus be a retarding influence in the maximum usefulness of that particular commodity or service.

On the other hand, I emphatically agree with Mr. Soule that, in order to make certain that the wage-earners get their proper share of any increase in per-capita productivity, an index of national per-capita productivity should be developed and used to supplement the practice of applying mere cost-of-living index figures in direct ratio on former wages; but I would add that the productivity figures should also be used to supplement so-called living wage figures.

In making wage determinations arbitral boards seem to have placed the sole emphasis in the direction of a consideration of family budgets which Professor Ogburn discussed, and very little reference has been made to the figures of total national productivity or industrial productivity or to the index numbers of these figures; and that brings me to my first point, that the difficulty with the living wage idea is that too often the relation of it to the capacity of the national income has been ignored. It is true that some who are sponsors of the idea have recognized this relation. For example, Professor Herbert Feis, says, in a recent book:

> .....This essential relativity of the living wage idea is well pointed out in a decision of Justice Brown of the South Australian Industrial Court, as follows: "The statutory definition of the living wage is a wage adequate to meet the normal and reasonable needs of the worker. In other words, the conception is ethical rather than economic. The Court has not to determine the value of the services rendered, but to determine what is necessary to meet normal and *relative* needs. It should be obvious that in the interpretation of reasonable needs the court cannot be wholly indifferent to the national income. The *reasonable needs* of the worker in a community where national income is high are greater than the *reasonable needs* of the worker in a community where the national income is low."

In other words, a living real wage in Germany or Austria today is far different from a living real wage in Germany or Austria of 1914. A living wage in China is different from a living wage in England. On the other hand, this feature of relativity seems to be wholly ignored by some economists, by public authorities, and in much public discussion. The minority opinion in the recent Railroad Labor Board decision did not allude to it. Professor Ogburn hardly mentioned it except to suggest that the wastes that take place in industry could be done away with. Unfortunately he wholly ignored the time element involved.

I think this attitude is somewhat due to a defect in the terminology commonly used. The very words "living wage" are a half truth. They are rhetorical rather than scientific, and do not suggest that either in making up or applying a particular set of figures the national productivity of the particular country and year should be taken into consideration. The term includes the comfort factor and excludes the national income factor.

Nor is it clear from the language Judge Brown uses or from discussion elsewhere with respect to this process of relativity whether it is the statistician or the court who is to make the correction of the comfort factor by a consideration of the national income factor. Professor Feis suggests that in making up cost-of-living figures an index number of *total* commodities be used instead of merely retail prices of articles actually consumed, because it would insure a closer accord between wages and total product than the widely used present method. It seems to me it would be a much better method of approach to use ordinary cost-of-living figures and to supplement them with index figures of per-capita national productivity and particularly index figures of national industrial productivity, in the first place because this method is more direct, and, secondly, because it is healthy to advertise to all concerned just what the limits of the national income are and have been.

In any event the figures which are generally advertised as a living wage indicate that the correction has not been made and that the comfort factor alone has been considered. I shall take some of them at random. The figures of the Bureau of Economic Research show that in 1918 71.4 per cent of the products of mines, factories, and land transportation went as pay to manual and clerical employees excluding salaries of officials, and that for that year the average yearly earnings of the same group in mining, factories, and transportation was $1283, $1148, and $1286 respectively; and Professor Ogburn estimated that the minimum of subsistence in June of that year, for a family of five, living in a large eastern city was $1350 to $1400, and in November about $1500. The National War Labor Board estimated what was called the minimum comfort level in June, 1918, for a family of five in such a city as $1760 a year.

In 1919 the national income, according to the Bureau of Economic Research, was $62,000,000, being $1690 per person gainfully employed, and the Bureau of Labor Statistics estimated as a standard of health and decency, for August of that year, for a family of five living in Washington, a budget of $2262.47, and for October of that year, $2288.25. These figures were widely published and their presentation to the public was not coupled with any discussion of the figures of national production, nor was there any suggestion that the national income imposed any limits.

I am not belittling the realities represented by figures of the comfort factor. The standards set are none too high for providing for comforts which every enlightened person desires a workman should have.

I recognize that the demand for a reasonable standard of comfort may be a spur in effecting economies of management and the installation of labor-saving devices; but it is submitted that this does not obviate the desirability of impartial economists emphasizing that the national income factor

must also be taken into consideration in setting a fair wage. If we continue to use the term "living wage," it should be explained or qualified wherever used and its presentation should be always coupled with a discussion of the national income factor. Otherwise we are furnishing ammunition to the ultra conservatives on the one hand and to the demagogues on the other.

As far as the ultra conservatives are concerned, it is easy for them to demonstrate that to set up a wage based on the comfort factor alone as indicated by the use of the term "living wage" is dangerous. The living wage, they say with some justification, means that certain groups to which the test is applied will profit at the expense of other groups of the community; or if applied to all, which is probably impossible, we merely raise prices and dislocate industry. Thus this man of straw which has been conveniently set up is knocked down and the comfort factor (and, by association, scientific wage determination) in its entirety discredited. By using the term "living wage" without making clear the relation of national industrial productivity to it, liberal middle-of-the-road public opinion may be alienated, enlightened social reform imperilled, and the effort to make wage settlement a justiciable instead of a nonjusticiable question retarded.

In the other direction, by failing to emphasize this relativity to the national income false hopes are raised in the minds of an untrained public that cannot be satisfied, and catch-words furnished to the purveyors of quack economic remedies.

The economist has a most important duty with relation to the clarifying of public thought and discussion on such subjects. It is his function to discourage muddy thinking and encourage true sophistication. This will not be promoted by failure to emphasize in what he says or writes important factors in the situation. We must remember that the public takes these figures quite literally—many of them have no conception of the idea of national income. By all means let economists hammer at the idea that the present real wages do not in many instances provide what common sense considers adequate comforts and point out that management in a much larger measure than labor, as the Federated Engineering Societies pointed out, is wasteful in producing the national income—I entirely agree with what Professor Commons said about the primary responsibility of management—but let them not in the process create mistaken public impressions as to what can be done in the immediate present.

To come now to my second point, namely, the question of the relation of general wages to productivity, I approach the question from a different angle from Mr. Soule. He has raised the question as to what share of the national income present and future shall reach individuals in the form of real wages. I rather discuss the question as to whether a particular policy generally adopted as to basic wages may have an effect upon production and thus upon the extent of the national income. Industry is dynamic and wages may be a cause as well as an effect.

Extremists on one side suggest that there is so much national production —so many laborers—and as only a small proportion goes to capital and management to raise money wages generally is merely to increase prices

and not to raise real wages but merely to create economic disturbance. Extremists on the other side suggest that if wages were raised radically in some miraculous way production would increase—in other words, we could, as it were, pull ourselves up by our own bootstraps. I think we may safely take a middle ground and assume that it is at least possible that the rate of progress of national productivity may be substantially affected by the particular wage policy adopted.

Particularly at certain critical periods of a business cycle it would seem as if the policy, liberal or otherwise, that is adopted by industrial leaders and arbitral boards may have an important influence on the future trend of the curve and upon future national productivity.

In order to make my point clear I will suppose that we are at that point in the depressive period of a business wave when wages are being deflated. A certain amount of deflation is inevitable and necessary, but at this juncture employers and arbitral boards are under the necessity of deciding just how drastic the cuts are to be. They decide not to make too drastic a cut but to make-up the balance of the saving in cost that is necessitated by the lower prices they are receiving by increased managing efficiency and the installation of labor-saving devices. By maintaining wages at certain levels at such a time, by discounting the future and not cutting quite to the extent indicated by the decrease in the cost-of-living index, but instead leaving a little "play," employers may challenge themselves to create a greater per-capita productivity.

There is, of course, another aspect to the question on which I will not elaborate—whether the fact that money wages are maintained at such a period does not prevent a diminution in the resources of the large consuming public and thus accelerate a resumption of business activity.

But to come back to the question of productivity. There are economists I am sure who are skeptical whether the rate of progress can be accelerated in this way. They take a rather fatalistic view and assume that the secular trend of production is constant; that statistics indicate that there is a normal growth in industrial arts, a very definite regular increase in productivity, which cannot be speeded up in this manner. Any departure from a policy of drastic wage deflation at such a juncture they say would merely have the effect of disturbing healthy liquidation and getting down to a so-called normal price level. I am one of those who am inclined to believe that a less drastic policy would serve to accelerate productivity as suggested and be a more healthy influence.

From a broad perspective as affecting total production, this whole subject would seem to be more important to the economic welfare of everybody in the country than any question of distribution between profits and wages.

Besides helping to guide employers, more light upon it will assist in furnishing principles and creating the standards which arbitral boards, where they exist, may follow. As I have previously suggested, too much emphasis has been placed on the consideration of family budgets and too little on the figures of total national productivity. In addition to the consideration of index numbers of per-capita productivity for the nation and for the particular industries, a certain percentage might be considered

as a load upon production figures to discount the possible future additional productivity which might be brought about by a liberal wage policy. But in this connection it should be kept in mind that we cannot afford to be too radical in discounting the future on behalf of any particular minority of the workers, because it might only be at the immediate expense of the majority.

The upshot of the discussion then is that it is important, on the one hand, that the public and laboring group be impressed in just as widespread a fashion as possible with the fact that the term "living wage" is a half truth and there is a limit to the national income, and, on the other hand, that employers and the public generally be made to realize that a sanely liberal policy as to general money wages will in all probability help to bring about a larger productivity.

THE COURSE OF AGRICULTURAL INCOME DURING THE LAST TWENTY-FIVE YEARS

By David Friday
Michigan Agricultural College

It is the purpose of this paper to set forth the course of the American farmers' income during the twenty-five years which have elapsed since industry recovered from the depression of the nineties in the year 1897. The writings of those who speak for the farmer these days make a doleful tale. Every one seems called upon to present the picture as darkly as may be. In the latest book on the agricultural situation we read that "while professing great faith in the man on the land, our people have developed an apathy toward the real needs of agriculture, until an impending disaster, long forecast and foretold, had to break upon our heads to awaken us." Again we read that "Even today, after three years of readjustment, what the farmer sells is anywhere from 20 to 50 per cent nearer pre-war prices than what he buys. And pre-war prices themselves were notoriously unfair to him." We are told that the farmer has not had both wages and returns upon his property at any time in the last fourteen years, except in 1918 and 1919. What happened before that we are not told, because the figures of the National Bureau of Economic Research do not go back beyond 1919. The implication is, however, that the farmer's situation has always been bad, and with the progress of time has gone from bad to worse except for the few years when war lifted him out of the slough.

These utterances are calculated to produce in the mind of a large part of our population, and of the agricultural community in particular, the impression that the lot of the farmer has not improved for many years. Instead, history has brought him by degrees to the verge of financial and economic ruin on which he is now reputed to be tottering. Surely this is a proper sphere of inquiry for the political economist. If the implications which inhere in these utterances are sound, the situation of our agriculturists is one that warrants political action. If these implications are mistaken, it is well that we know it. For it can benefit no one, not even the farmer, to prescribe remedies for conditions which are non-existent.

It is of interest to note, before passing to the examination of the statistical evidence regarding the farmer's income, that there have been times in the past when agriculture in the United States has been considered prosperous. Viewed in retrospect, the year 1895 would not impress us as a prosperous one for the farmer. Yet in that year the *Yearbook of the Department of Agriculture*, after estimating the value of farm products at $2,300,000,000, issued this challenge:

"In the presence of these facts how can anyone dare to assert that farming is generally unremunerative and unsatisfactory to those who intelligently follow it?" And in that dark year 1896 Secretary Morton reviews the situation after this fashion: "The constant complaint by the alleged friends of farmers, and by some farmers themselves, is that the government does nothing for agriculture. In conventions and congresses it has been proclaimed that the farmers of the country are almost universally in debt, despondent, and suffering. Largely these declarations are without foundation. Their utterance is a belittlement of agriculture, and an indignity to every intelligent and practical farmer in the United States. The free and independent farmers of this country are not impoverished. They are not mendicants; they are not wards of the government, to be treated to annuities. They are the representatives of the oldest, most honorable, and most essential occupation of the human race.....

"Legislation can neither plow nor plant. The intelligent, practical, and successful farmer needs no aid from the government. The ignorant, impractical, and indolent farmer deserves none. It is not the business of government to legislate in behalf of any class of citizens because they are engaged in any specific calling, no matter how essential the calling may be to the needs and comforts of civilization."

In that year the writer sold corn in Michigan at 19 cents a bushel, and hauled it five miles to deliver it. Three years later, in 1900, there was universal comment on the prosperity of the farmer. Every one interested in this problem of agricultural prosperity should read the opening pages of a little volume entitled *Our New Prosperity*, written by Ray Stannard Baker in that year. Although the utterances of Secretary Morton in 1896 and 1897 may have been overly roseate, there can be no doubt that the farmers considered themselves prosperous in 1900.

This paper will trace the course of agricultural income from the year 1897, when the industry was just emerging from a severe depression which had lasted for three years. In that year the gross value of all agricultural products was just under four billion dollars. By 1900 larger crops, coupled with better prices, had raised the value of the farmers' output to five billion dollars; hence the increase in the farmers' state of well-being. In tracing the course of agricultural income, it seems wise to start with a point such as is here chosen, where the relative prosperity of agriculture was universally conceded. Then, too, the beginning of the period lies far enough in the past to enable us to gain a proper perspective.

Most of the comparisons of agricultural income made nowadays go back to 1913 as a basic year for purposes of comparison. One computation, that of the National Bureau of Economic Research, reaches

back to 1909. Its findings produce a rather colorless impression just because there is no clear notion in the mind of the reader concerning the relative state of agricultural well-being in the period immediately preceding the European war. It seems wise, therefore, to select as our starting point a period in which the prosperity of the farmer was pronounced.

What, then, was the farmer's income in 1913 as compared with 1900? What was it in 1919 at the height of war prosperity, and what was it in 1922? Several methods have been employed in comparing the course of agricultural income at different periods of time. One procedure much in vogue at the present time is to set the course of agricultural prices over against the movement of all prices. This method has found special favor in the eyes of the spokesmen of the farming interests, and is being used by the Department of Agriculture. Let us begin, then, by setting down the course of prices of farm products and of all commodities for the last twenty-five years as shown by the revised index number for wholesale prices of the United States Bureau of Labor Statistics. (See the table on next page.)

When using these figures for the purpose of arriving at an index of the farmer's economic condition, it has been customary to compare the prices which he received during past years with those of 1913. Likewise, in translating these prices into real income, or purchasing power, it has been customary to compare them with the prices of other commodities in 1913. Now there is nothing about the year 1913 which entitles it to special consideration when we are seeking for a normal year, except perhaps that the balance existing between the prices of farm products and all commodities at that time had prevailed for five years. Certainly it is well to ballast our judgment by several comparisons taken at different times. If we compare it for a moment with the prosperous year 1900 we find that the relation of the prices of farm products to all commodities is almost precisely the same in 1922 as it was in that year. If we compare the prices of farm products with those of all commodities for the years 1897 to 1912 inclusive, we find that the former stood at 81 and the latter at 86 per cent, respectively, of those of 1913. Throughout this period of sixteen years, then, the price situation was, on the average, less favorable to the farmer than in the years immediately preceding the war. The balance between farm products and all commodities which prevailed in 1913 was first attained in 1909; and it remained practically undisturbed in the five years culminating in the outbreak of the European war. In the two years 1899 and 1900 farm products were eleven points lower than all commodities.

When we consider the years from 1914 to date, we find that the

BUREAU OF LABOR REVISED INDEX NUMBERS OF WHOLESALE PRICES

Year	Farm Products	Excess Farm over All Commodities	Excess All Commodities over Farm Products	All Commodities
1890	70		11	81
1891	75		5	80
1892	68		7	75
1893	71		6	77
1894	61		8	79
1895	61		9	70
1896	55		12	67
Average 1894-96	59		10	69
1897	59		8	67
1898	63		7	70
1899	64		11	75
Average 1897-99	62		9	71
1900	70		11	81
1901	74		5	79
1902	81		3	84
1903	77		9	86
1904	81		5	86
1905	79		7	86
1906	80		9	89
1907	87		7	94
1908	86		4	90
Average 1900-08	80		6	86
1909	97	0		97
1910	103	2		101
1911	93	0		93
1912	101	2		99
1913	100	0		100
Average 1909-13	99	1		98
1914	103	5		98
1915	104	3		101
1916	123		4	127
1917	190	13		177
1918	218	24		194
1919	231	25		206
Average 1914-19	161	11		150
1920	218		8	226
1921	124		23	147
1922	133		16	149
Average 1897-1922	109		3	112
Average 1897-1912	81		5	86
Average 1914-1922	160	2		158

index number for farm products averages two points higher than does that of all commodities. It stood at 160.4, while all commodi-

ties stood at 158.3. There are good reasons for believing that the conclusion of the building boom, the improvement of the coal situation, and the competition of foreign manufactured goods in American markets, coupled with the migration of labor from the farm to the city, will create a situation within another twelve months where the relation of prices of farm products to other commodities will be at least as favorable as it was in the fourteen years of agricultural prosperity which culminated in 1913.

The man who has farmed continuously for the last fourteen years has enjoyed throughout that entire period an average price for his product which was, relative to the prices of all commodities, as favorable as that which existed in 1913. The man who sold his farm after reaping the increase in prices which occurred between 1914 and 1919 is fortunate indeed. Conversely, anyone who purchased his farm and equipment at the prices which prevailed in 1919 and 1920 must be in sore financial difficulty. The great mass of our farmers have neither sold nor bought farms; they have owned and operated the same farms throughout this entire period and for many years previous. These men have, on the average, enjoyed a more favorable price situation during the last decade and a half than they did during the ten years from 1900 to 1909. And those were conceded to be years of prosperity.

For the last two years the situation has been less favorable. This is due, not to any conspiracy against the farmer, but to a fundamental fact concerning agricultural production which arises out of the nature of that industry. Agriculture, unlike most industries, does not decrease its productive effort or its output when demand decreases and prices fall in times of general depression. The reason for his failure to reduce production is that the farmer is not only capitalist and entrepreneur, but the principal laborer of his enterprise as well. The additional labor is furnished for the most part by members of his own family. Because of this fact he is in no position to cut down costs by dismissing his labor, as is the manufacturer. He would lose more by reducing production on his individual farm than he could gain by the rise of prices. So agricultural output continues at the full during depression, while manufacturing and mining decline. In such a situation it is quite natural that the prices of farm products should fall more than those of most other commodities. It is interesting to note in passing that owing to the decline in demand, the prices of metals fell to the same point as agricultural products during our recent depression. In December, 1922, metals were still fourteen points below them.

The question will inevitably arise whether it is permissible to gen-

eralize after this manner, drawing conclusions with respect to agricultural income from price index numbers. Certainly such conclusions are subject to grave limitations. The chief of these is found in the fact that we are using index numbers of wholesale prices paid not at the farm but in most cases at central markets. The prices quoted usually include transportation charges from the farm to that market. These must be deducted before we can arive at the amount which the farmer receives. On the side of the commodities which the farmer buys, these index numbers are subject to two limitations: first, they are wholesale and not retail prices; and, second, they are not weighted in accordance with the farmer's customary purchases.

The Department of Agrciulture and the Bureau of Labor Statistics in coöperation could do the field of economic statistics an immense service by constructing a new index number properly weighted for the things which the farmer buys. These should be grouped under the two headings "Consumers' Goods" and "Producers' Goods." It is high time, too, that some one undertake the construction of an index number covering the services of transportation and public utility companies. The omission of these commodities from existing index numbers is one of their greatest defects.

But this criticism of the results derived from the employment of inadequate index numbers cannot be urged as a defense by those who have themselves employed this method. It is entirely proper to use this data in subjecting their findings to critical examination.

All conclusions concerning agricultural income drawn from an examination of price data must be corrected for another factor. Income is the product of prices multiplied by output. The output per person engaged in agriculture has not remained stationary during the last quarter century. The statistics of Edmund Day and Walter Stewart show that agricultural output measured in physical units has been almost 40 per cent higher, on the average, since 1914 than it was in 1900. The number of people who produce these commodities has not increased by more than 10 per cent. The output per person is, therefore, fully 25 per cent higher than it was two decades ago. When this corrective factor is taken into consideration, it becomes clear that the income of the farmers of this country from 1914 to 1922 inclusive was approximately one-third greater per farmer, measured in terms of actual purchasing power, than it had been in the decade following 1900. It is this growth in income which is primarily responsible for the increase in the value of agricultural land and buildings from less than $17,000,000,000 in 1900 to over $66,000,000,000 in 1920. When this fact of increased productivity is taken into consideration, the purchasing power of the average farmer, even in 1922, is greater than it was in that earlier decade.

So much for the approach to this problem of agricultural income by way of price index numbers. A more direct method of approach is through the figures of gross value of farm products based on prices at the farm. These have risen from a little less than $4,000,000,000 in 1897 to $5,000,000 000 in 1900, and to $9,895,000,000 in 1914. They reached their highest point in 1919, when they amounted to $23,783,000,000. In 1921 they fell to $12,366,000,000 and for 1922 they stand at $14,310,000,000. The following table sets forth the total gross value of farm products annually since 1897.

ANNUAL GROSS VALUE OF FARM PRODUCTS IN UNITED STATES

(In million dollars)

Year	Gross Value	Percentage of Each Year to 1913 as 100
	$	%
1897	3 961	40.2
1898	4 339	44.0
1899	4 717	47.8
1900	5 010	50.8
1901	5 302	53.8
1902	5 595	56.8
1903	5 887	59.7
1904	6 122	62.1
1905	6 274	63.7
1906	6 674	68.6
1907	7 448	76.0
1908	7 891	80.1
1909	8 558	86.9
1910	9 037	91.7
1911	8 819	89.5
1912	9 343	94.8
1913	9 850	100.0
1914	9 895	100.4
1915	10 775	109.4
1916	13 406	136.1
1917	19 331	196.2
1918	22 480	228.2
1919	23 783	241.4
1920	18 263	185.4
1921	12 366	125.5
1922	14 310	145.3

These are figures of gross value, rather than net. They contain both the corn which the farmer grew and the pork which was produced by feeding the corn to hogs, the oats and hay which were fed to the horses, and the wheat and cotton which these animals were employed to grow. They are subject to other limitations, too; but for all that they are the most accurate index of the income of the

farmer over the last quarter century. It is true that the figures for net value product of agriculture reached by the National Bureau of Economic Research for the years 1900 to 1920 are not a constant percentage of the gross value shown by the Department of Agriculture. According to the National Bureau, the net value product was 60, 61, and 60 per cent of the Department's gross in 1913, 1914, and 1915 respectively. By 1917 it was only 50 per cent, but by 1919 it had risen again to 62 per cent. In the intervening years, 1916 and 1918, it was 54 and 56 per cent respectively. Investigation shows that this fluctuation in the relation of net value to gross was due to inventory adjustments of live stock on farms. These were of large proportions and were arrived at, according to the Bureau's publications, by the use of a "rather devious plan of computation." The deviousness of these computations, and the number of assumptions which they involve, incline one to the view that their omission would give a more accurate picture of the net value product of agriculture from year to year.

Whatever limitations may inhere in the gross value figures of the Department as an index of fluctuations from year to year, they are a dependable index, according to all evidence, for periods covering a number of years. For the decade 1900-1909 the total gross value of all products was, on the average, 66 per cent of that of 1913. For the years 1914-1922 inclusive, the index was 164 per cent. During this latter period the wholesale price index for all commodities stood at 158 per cent, and that for farm products at 160. In the former decade the wholesale price index for all commodities stood at 87, while farm products were 82. The average number of people engaged in agriculture had not increased by more than 5 per cent between the two periods. Consequently, the real income per person engaged in the industry has been about 30 per cent higher since 1914 than it was in the decade following 1900. Even for the year 1922, it will be only slightly lower than it was in the earlier period.

The figures which have been cited concerning farm incomes do not settle the question of agricultural policy for the United States, nor are they intended to do so. But they do give us one historical fact which must be held in mind in formulating such a policy.

Nor do these figures throw any direct light upon the relative well-being of the people engaged in agriculture as compared with those engaged in manufacturing, mining, or transportation. The data concerning the gross value of agricultural products which has been presented does, however, permit of one comparision. In 1899 the gross value of agricultural products and the value added by manufactures were approximately equal. The same was true in 1904, 1909, and 1914. In 1919 the value added by manufactures ex-

ceeded the gross value of agriculture by about 5 per cent. The number of wage-earners employed in manufacture increased during the twenty years preceding 1919 from 4,712,763 to 9,096,372; while all persons engaged in the industry increased from 5,300,000 to 10,800,000. In agriculture the increase was hardly more than 10 per cent. Certainly the relative growth of income per person engaged must have been markedly greater in agriculture than in manufacturing. It is certain that the rewards of agriculture have been sufficient during this period to increase the number of farms by 12 per cent and to increase the output by almost 40 per cent.

No attempt is made here to arrive at the absolute net income, either in agriculture or in other lines of industry. That is an important and interesting problem, and some day we may have figures covering the various industries for the period here under review. Any consideration of that question would raise at once several problems which no one has yet attacked in a workmanlike manner. One of these is the rental situation for residences and the amount which shall be imputed as income to the farmer on account of this factor. It is certain that this problem in rural communities is not imposing the burden and the hardship which the shortage of houses has created in our industrial centers. The number of houses in the rural communities has increased more rapidly during the last twenty years than has the population; and the quality of those houses has been greatly improved. Very few farmers find themselves called upon at this time to invest their capital accumulation in additional housing facilities at these high prices. This is one of the counterbalancing factors in the situation during the last few years which has been overlooked by the spokesmen for agriculture. Many a city dweller has found it necessary to invest as much in a home as the farmer has invested in his farm.

Another factor which has been neglected in the comparison of incomes in the various industries is that of taxation. In 1919, at the peak of prices and of income, the total taxes paid by all farmers to all governments, state, local, and national, were less than $750,000,000. The manufacturing establishments paid, in the same year, $2,079,000,000; their stockholders and employees paid at least another billion dollars in taxes. In 1914 the farmers paid less than $400,000,000 in taxes, while manufacturing establishments paid $441,000,000. The increase of taxes paid out of agricultural incomes has been much smaller during the last decade than that paid out of urban income. These factors of house rent and of taxes illustrate the type of problem which confronts the investigator who attempts to arrive at a comparative statement of income for different industries.

This paper has been frankly critical of the statements issued so freely in recent years which imply that there has been a great disparity in the growth of agricultural income as compared with that of other industries. Undoubtedly there are many farmers whose experience does not square with the course of agricultural income here set forth. There has been much real distress in agriculture, and there is still a great deal of it. But for the most part it is not due to any failure of agricultural income to increase during the last twenty-five years, nor to hold the increase which had been attained in 1913.

Those who have suffered during recent years fall into several broad classes. First of all, there is the man, usually young, who bought land, live stock, and equipment at the unusual prices which prevailed from 1918 to 1920. He misjudged the course of prices, and he must pay the financial penalty, as must every business man who does likewise. But in every such case a corresponding gain has accrued to the farmer who sold the land and the live stock. This whole upward movement of prices was aided and accelerated by that large group of country bankers in our western states who are in the business of land speculation. One seldom meets a banker from that state where the increase in land values was largest who does not boast that he is a farmer. Inquiry usually discloses the fact that he merely owns several farms; he is not a farmer, but a land speculator. For him there is no use for bank credit more to the public interest than to devote it to mortgage loans on farms. In this manner the prices of agricultural land and buildings were supported at a preposterous level by the use of bank credit. The subsequent decline in prices, the inevitable aftermath of war, has left a crop of retired farmers and of bankrupt purchasers. It would have required a remarkable course of agricultural prices and income to save most of these people.

Another class which suffered loss consists of those who bought cattle, sheep, and hogs for feeding purposes in the early part of 1920. After feeding them grain which might presumably have been sold at a high price to one's neighbors, who were likewise feeding animals purchased at big prices, the stock was often sold at no more than its original cost. Unless these people had been feeding in previous years when prices were rising, they suffered a loss which will be difficult to recoup. Two observations will be of interest in passing. The high prices which were paid by the feeders were received by the farmers who sold these animals; the winter of 1921-1922 was the most profitable year that the feeders of sheep and lambs have had in certain parts of the Middle West.

There is a certain amount of financial distress confined to specific

geographical areas. Anyone who is acquainted with the situation in North and South Dakota and certain parts of Minnesota and Montana, with their one-crop system of agriculture and their frequent crop failures, must realize that this geographical area will normally be in a state of distress except when a succession of fairly favorable years lifts them out of the slough of despond. What many of these sections need is not so much price stabilization or easier credit. They need diversified farming, or, in extreme cases, railroad tickets to agricultural sections where the chances of success are more promising.

And finally, a large group, very large indeed, is in distress because of sheer inefficiency, because of an utter failure to profit by the advances which the application of science has brought to agriculture. Their costs of production are entirely too high. Every man who attempts to formulate a program for the agricultural development of a state or of the nation soon finds that there are two fundamental facts concerning agriculture which constitute the heart of the problem. The first of these has to do with the nature of the organization of the agricultural industry. Ten million six hundred thousand people are engaged in agriculture, and they are working on six and one-half million farms—less than two persons to a farm. Manufacturing engages practically the same number of people. There are less than three hundred thousand manufacturing establishments in the United States. The manufacturing industry has less than 700,000 people, all told, classed as firm members, officers, superintendents, and foremen. These constitute its managerial staff and are less than 7 per cent of the 10,800,000 people in the industry. They have been selected by a severe process of competition. In agriculture there are more than 6,000,000 managers who decide what shall be produced, what methods of production, of financing, and of marketing shall be employed. They constitute over 60 per cent of all the people engaged in the industry.

The other fundamental fact which impresses anyone who applies his mind to the agricultural situation is the wide diversity of productive efficiency which prevails among the units which the farmer employs in carrying on his business. Thirty per cent of an ordinary flock of hens lay no eggs whatever. Another third of the flock will lay about seven dozen apiece per year. They lay them in the spring of the year, when even the crows lay eggs, and when they are cheap. At the top are 10 per cent which will lay from twelve to fifteen dozen or more. These hens can all be classified by inspection. These are technological facts of tremendous import. The dairy cows in an average state will produce less than 3,500 pounds of milk, and less than 150 of butter fat. One-half of all the dairy cows in the

Middle West produce 3,000 pounds of milk or less. There are many herds in our Middle Western states whose average is 10,000 to 12,000 pounds of milk per year, and 400 to 500 pounds of butter fat. These technological facts are the most important foundation for any program of economic improvement. The inefficient units with which the great mass of our farmers are still operating, and the ineffective methods which are employed by fully one-half of our 6,500,000 farmers, are the chief causes of distress among this large agricultural group. It may be economically unsound to counsel increased production for American agriculture, but only good can come from a decrease in the cost of production.

ACCUMULATION OF WEALTH BY FARMERS

By L. C. Gray

U. S. Department of Agriculture

On account of the scarcity of the available statistics on the subject of this paper and the necessity of overcoming serious statistical obstacles, the reader will appreciate the fact that results accurate to the last figure were not to be attained. In short, the task is the making of an estimate of unknown magnitudes in the light of the best data obtainable.

The first question that I have attempted to answer is, how much have farmers as a class accumulated? That is, what is the net worth of farmers as a class? This estimate has been made as of January 1, 1920, for at this date there is a fortunate concurrence of census data and other statistical material needful for the task.

I. *The Net Worth of Farmers*

1. Farm assets.

a) *Farm real estate.* All farm real estate belonging to owner operators is an asset of the farming class. This amounted in 1920 to $24,058,745,303 for land and $6,651,975,461 for buildings. The farm real estate owned by part owners as distinguished from that rented by them is also clearly an asset of actual farmers. This amounted to $4,480,927,688 for land and $700,252,276 for buildings.

There remains the land rented by tenants, the land rented by part owners, and the land operated by hired managers. For these three groups, amounting in all to nearly half the total value of farm real estate, it is desirable to determine the proportion that belongs to actual farmers—that is, to farm operators. The Division of Land Economics has accumulated figures on the occupations of upwards of 23,000 owners of rented farms widely distributed throughout the United States. On the basis of these statistics I am enabled to employ an index of the percentage of all owners of these classes of farm real estate who are actual farmers or wives of actual farmers. Employing this index gives a figure of $8,412,764,822 for land and $1,322,947,778 for buildings.

b) *Live stock and implements.* By a study of the results of 11 business analysis surveys made by the Bureau of Agricultural Economics, involving 2,219 farms, the average percentage of operating capital owned by landlords was determined and these percentages were then multiplied by the total value of live stock and implements owned by each class of tenants.[1] The landlord's share is relatively a very small figure, and this has been distributed between farmer landlords

[1]For these data I am indebted to advance statistics supplied by the Bureau of the Census.

and other landlords in the same proportion as the ownership of real estate was distributed above. The results of these various estimates may be summarized as follows:

	Value of Farm Implements	Value of Farm Live Stock
Farms operated by owners	$2,447,792,781	$5,299,530,256
Farms operated by managers	103,773,702	363,282,838
Farms operated by tenants	1,043,206,445	2,350,511,714
Total	$3,594,772,928	$8,013,324,808

Joint Value of Implements and Live Stock on Tenant Farms.

Total	$3,393,718,159
Owned by tenants	3,095,717,984
Owned by landlords	298,000,175
(Owned by landlords) (who are farming)	95,360,056
Total value of live stock and implements owned by actual farmers	$11,405,457,617
Total value owned by landlords who are not farmers	$ 202,640,119

c) *Crops on hand January 1.* The following method of estimating the value of crops on hand January 1 has been employed: Taking data on sales of crops by months, it was assumed that the percentage sold in the six months following January 1 represents the amount on hand at that date. This is 30 per cent. Since approximately 60 per cent of crop value is sold we have 30 per cent of 60 per cent or 18 per cent of the total crop value of the previous year on hand January 1.

It is estimated that 40 per cent of the total value of crops is fed to live stock. Assuming that the part of this amount on hand January 1 is measured by the proportion of live stock sales in six months subsequent to January 1, I have estimated that 50 per cent of the crops fed to live stock is on hand January 1. Hence the part of the crops fed to live stock, on hand January 1, is 20 per cent of the total crop (50 per cent of 40 per cent).

Combining 20 per cent and 18 per cent gives 38 per cent of previous year's crop value on hand January 1. The census value of crops in 1919, other than garden products raised for home use, was $15,295,000,000.[3] Thirty-eight per cent of this equals $5,812,000,000 on hand January 1, 1920.

However, not all of this belonged to actual farmers. Since the Census has not published farm acreage by sub-classes of tenure, it is assumed that the proportion of farms rented for share and standing rent to total number of farms measures the proportion of the value of crops on hand which is attributable to those classes of tenure.

[3]Preliminary Census figure. Subsequently slightly changed.

This is 29 per cent and indicates a total of $1,685,000,000 that may be divided between tenant farmers and landlords. The landlord's share of this would be approximately 35 per cent, leaving 65 per cent, or $1,095,000,000, belonging to tenant farmers. However, we have found that about 32 per cent of the owners of tenant farms themselves belong to the farming class. Making allowance for this, only 24 per cent, or $404,000,000 is attributable to those landlords who are not farmers. This leaves a total of $5,408,000,000 as the value of crops on hand January 1 belonging to actual farmers.

d) The value of growing crops. The two principal growing crops on hand January 1 are winter wheat and rye.[3]

The acreage of these crops has been multiplied by a figure on cost of planting wheat, including labor, seed, and fertilizer, for three winter wheat states.[4]

The figure thus obtained is $277,019,520.[5]

e) Other items of farm capital. There are a few minor items of farm capital to be considered. On most farms there are miscellaneous supplies on hand, including such things as lumber, fencing, fertilizer, purchased feed, etc.[6]

It is the opinion of those in charge of farm business analysis studies in the Bureau of Agricultural Economics that the gross value of these items likely to be on hand is only a small fraction of one per cent of the total value of farm capital. There has been allowed for this item $300,000,000, or roughly $50 per farm.

Theoretically, the average cash on hand needed to run the farm is also an item of capital. A study of business analysis records indicated that about one per cent should be allowed for this item, or approximately $800,000,000.[7]

The various items of farm capital and the distribution of owner-

[3]Permanent pasture is probably included in real estate value, and the same is true of orchards. A few winter forage crops, such as crimson clover, winter oats in the South, etc., may be disregarded for present purposes.

[4]"Cost of Producing Wheat", 1919, by M. R. Cooper and R. S. Washburn, Bul. No. 943, U. S. Dept. of Agr.

[5]There might be a slight error due to the difference between the cost of wheat seed and the cost of rye seed. The total acreage of the two crops harvested in 1920 was 42,816,000 (*Yearbook* for 1920). It did not appear desirable to attempt to divide the estimated value of growing crops between farmers and landlords. Indeed, technically it may be questioned whether any of it is assignable to landlords.

[6]Unfortunately these are not included in the capital account of farm business analysis studies but are carried direct to expense column.

[7]The studies showed that the amount designated by the average farmer as cash to run the farm is an item which varies ordinarily from 0.4 to 1 per cent of the total farm capital. In the plantation sections of the South where the advancing system prevails the item may run as high as 4.8 per cent. Since it is practically inseparable from the total cash and deposits of farmers, it will be later allowed for in the estimate of bank deposits owned by farmers, and deduction will be made for the duplication.

In the case of both miscellaneous supplies and cash to run the farm, it does not seem necessary to make any deduction for that part owned by landlords who are not farmers, for it is believed that their share is relatively insignificant.

ship between farmers and non-farmers may now be summarized as follows:

FARM CAPITAL AND ITS OWNERSHIP, JANUARY, 1, 1920

Items	Farm capital	Owned by farmers		Owned by others	
		Amount	Per cent	Amount	Per cent
Land	$54,829,563,059	$36,952,437,813	67.4	$17,877,125,246	32.6
Buildings	11,486,439,543	8,675,175,515	75.5	2,811,264,028	24.5
Total real estate	66,316,002,602	45,627,613,328	68.8	20,688,389,274	31.2
Total live stock and implements	11,608,097,736	11,405,457,617	98.3	202,640,119	1.7
Value of crops on hand	5,812,000,000	5,408,000,000	93.1	404,000,000	6.9
Value of growing crops	277,019,520	277,019,520			
Miscellaneous supplies	300,000,000	300,000,000			
Cash to run business	800,000,000	800,000,000			
Total farm capital	$85,113,119,858	$63,818,090,465	74.98	$21,295,029,393	25.02

2. Wealth owned by farmers other than farm assets.

For a number of the categories of other wealth, I have employed indices made possible by data concerning 1102 farm families obtained by the Division of Land Economics in four local tenure surveys made in five different localities, surveys in which an attempt was made to list the various classes of wealth owned by farmers.[8]

I have experimented a good deal with different methods of employing these figures as indices for the nation as a whole. Obviously to use the absolute per capita figures as a basis for estimating the total amounts for all the farmers of the nation might result in considerable error. In order to reduce this error I have employed a relative, rather than an absolute, factor for owners and part owners. This factor is determined by calculating the ratio of the per capita figure for each item of assets to the average net worth of the farmers in each of the two tenure groups. The relative figure has then been weighted by the number of farmers in each of the two tenure classes

[8]These four surveys were made in the Black Prairie of Texas; Williamson and Madison Counties, Tennessee (the former in the general farming region of the Nashville basin and the latter in the cotton growing region near Memphis; the Blue-grass region of Kentucky, and Montgomery County, Tennessee, a tobacco growing region.

While these regions were all in the South, they are by no means regions where the farmers are poor as compared with the general farming regions of the North. The average value of farm real estate per farm operated by owners in the five regions is nearly twice as high as the average for the United States. The total assets and present net worth of farmers in the five regions is also by no means indicative of relatively small resources.

to get a weighted average ratio figure. This was then applied to the net farm capital owned by owner operators and part owners.

The magnitudes for croppers and tenants was determined not by the use of a relative based on net worth, as in the case of owners and part owners, but simply by multiplying the absolute averages per farmer by the total number of farmers in each of the two tenure classes.[b]

The samples of wealth owned by croppers were for the most part taken from sections of the country not representative of the plantation croppers, but rather of a class of croppers somewhat higher in the wealth scale. Data on plantation croppers for some of the items of wealth, as well as for debts owned, are available from certain plantation studies made by the Division of Land Economics, Bureau of Agricultural Economics. Since the plantation croppers are approximately three-fourths of the total number of croppers, a substantial revision of the figures on croppers' wealth was made on this account.

The results of these estimates of the items of other wealth are summarized in the following table:

OTHER WEALTH OWNED BY FARMERS

Tenure	Cash and deposits[a]	Stocks owned	Bonds owned	Town real estate estate owned
Croppers	$ 77,777,034	$ 325,433	$ 68,341	$ 18,224,236
Other tenants	1,893,713,000	124,985,058	206,414,717	225,351,847
Part owners	200,203,260	64,732,080	29,841,120	16,383,360
Owners	1,463,996,740	825,667,920	457,758,880	471,216,640
	$3,635,690,034	$1,015,710,491	$ 694,083,058	$ 731,176,083

	Household goods	Bills receivable (Including mortgages owned by farmers)	Miscellaneous other property (not including farm capital)
Croppers	59,554,199	15,620,773	1,650,856
Other tenants	702,567,523	427,979,138	58,705,103
Part owners	148,270,680	100,418,040	126,140
Owners	1,060,129,320	1,107,981,960	74,073,860
	$1,970,521,722	$1,651,999,911	$134,555,959

Total of other wealth owned by farmers $9,833,737,258

[a] It is recognized that the method employed gives a result for cash and deposits of tenants which is relatively too large as compared with cash and deposits of owners.

It may be noted that some of the other items of the above estimates have been scrutinized in the light of various available checks, the chief value of which has been to indicate that the errors in the figures above used are not unduly large when considered in their relation to the general purpose of obtaining an estimate of the net worth of the farming class as a whole.

[b] Since these classes own but little farm real estate, and since this is by far the largest item in farm capital, the use of the relative method of calculation would have exaggerated unduly the amounts of the various items of property owned by tenants and croppers.

3. Farmers' indebtedness.

In 1920 the mortgage debt on farms of full owners who reported on the subject amounted to $4,003,767,192. All of this may be regarded as owed by actual farmers. The Census of 1920 shows that the mortgaged farms owned and operated by part owners are 43.7 per cent of all farms of this tenure class, including the unknown cases. Assuming that the mortgaged farms in this group average the same value as do the non-mortgaged farms and that the proportion of mortgage to value of real estate mortgaged is the same as for mortgaged farms owned by full owners, we may estimate the mortgage debt owed by part owners against land owned and operated by them at $658,875,112.

In addition to these items there were 389,459 farms operated by owners and part owners in 1920 for which no report was made. Assuming that the percentage of cases mortgaged is the same as for those who reported and that the average amount of indebtedness per farm is the same for these cases as for the farms operated by owners which reported mortgage indebtedness, we have an allowance of $539,802,532 for the farms of owners and part owners not reporting indebtedness.

The mortgage debt on tenant farms has frequently been estimated by assuming the same proportion to value of farm real estate as in the case of farms operated by full owners. However, tenant farms are largely owned by persons in fairly good financial circumstances, and it may be doubted whether the proportion of mortgage indebtedness on such farms would be so high as on farms operated by owners. This is confirmed by results from certain local studies.[11]

The probability of a greater relative freedom from mortgage on rented farms is further shown by a comparative study of the age distribution of farm owners subject to mortgage and of the ages of owners of rented land. The Division of Land Economics has age statistics for 23,916 owners of rented farms in the United States. The arithmetic average age of these owners is 58.3 years, and the median is 59 years, while 75 per cent of the owners are over 44 years of age. If we consider the age distribution of retired farmers, who comprise more than a quarter of the total owners, the age is even more extreme, 65.0 per cent of the cases being over 60 years of age and more than 90 per cent over 50. Even the landlords who are active farmers (comprising over 30 per cent of all landlords) are characterized by a

[11] A study of mortgage indebtedness in Dane County, Wisconsin, by Hibbard & Robotka showed that of 1116 rented farms 38.5 per cent were mortgaged, amounting to 40.5 per cent of the farm acreage in these farms. In the same county in 1920 the Census shows that 62 per cent of the farms operated by owners and reporting mortgage indebtedness were mortgaged.

fairly advanced age grouping, 26.6 per cent being over 60 years of age and 57.5 per cent over 50 years of age.

On the other hand, as shown by the Census of 1910, the percentage of owner operators who are mortgaged declines sharply in the higher age groups. This is shown in the following table which is derived by a simple calculation from figures published in the Census for 1910.

Age	Per cent of all farmers in various age groups who are full owners of the farms they operate (A)	Per cent of all farmers in various age groups who are owner operators of mortgaged farms (B)	Ratio of B to A (C)
24 yrs. and under	18.64	5.66	30.40
25 yrs. to 34 yrs.	34.66	13.63	39.32
35 yrs. to 44 yrs.	50.20	19.20	38.25
45 yrs. to 54 yrs.	61.43	20.10	32.72
55 yrs. to 64 yrs.	69.98	18.17	25.96
65 yrs. and over	79.73	14.37	18.02

We may put these groups of facts together to form the following conclusions: About two-thirds of all landlords are either retired farmers or active farmers. Both classes show a large percentage of cases in the higher age groups. The census data indicate that of owner operators in the higher age groups a smaller percentage are mortgaged than in the lower age groups. Indeed for the age groups 55 years and over the unweighted average percentage of farm owner operators who report mortgage indebtedness is 23.4 per cent,[12] while for owner operators of all age groups reporting to the census on the subject of mortgage indebtedness in 1910, 33.6 per cent were mortgaged.

A rough presumption from the above facts is that probably the percentage of tenant farms mortgaged is not more than two-thirds as great as the percentage of owner operated farms subject to mortgage. In 1920 the mortgaged farms were 41.3 per cent of the cases reporting. It is presumed, then, that not more than 27 per cent of the tenant farms were mortgaged. On the basis of this rough presumption, and assuming that the proportion of mortgage debt to value of mortgaged tenant farms is the same as for mortgaged owner farms, we obtain a

[12]Obtained by weighting the figures in the last two age groups, by the percentage of all mortgage owners in each age group, and averaging the two groups thus weighted.

figure of $2,390,421,684 for the mortgage debt on farm real estate not operated by owners.[33]

The sum of the various items of mortgage debt as estimated above is $7,592,871,520, about one billion less than the estimated indebtedness on the assumption that the proportion of indebtedness to value is the same on farms not operated by owners as it is on farms operated by owners.[34]

We have still to allow for the fact that some of the mortgaged farms not operated by owners are owned by persons who are not farmers. As a basis for a rough estimate of this magnitude I have resorted to the index used in distributing the ownership of real estate between farmers and non-farmers, the assumption being that the mortgage indebtedness is distributed in the same ratio as the ownership is distributed. By this method of calculation it appears that of the estimated total mortgage indebtedness of approximately $7,500,000,000, $5,967,384,775 is owed by actual farmers and $1,625,486,745 by landlords not engaged in farming.

4. Farmers' indebtedness other than that secured by real estate mortgages.

In 1920 the Department of Agriculture sent a questionnaire to all banks in the United States asking the amounts of outstanding loans to farmers on personal and collateral security. Replies were received from more than 13,000 out of 30,000 banks. On this basis the total indebtedness of farmers on personal and collateral security is estimated at $3,869,891,415, as of December 31, 1920.[35]

These figures, however, are as of December 31, 1920. The study just referred to indicates that in January, 1920, bank loans to farmers

[33] It is probable that just as the percentage of mortgaged farms is smaller for farms not operated by owners than for farms operated by owners, so the percentage of mortgage debt to value is also smaller, for it may be presumed that in the case of retired farmers the original mortgage will have been somewhat reduced in amount by the time of retirement. However, we have no means of knowing how much allowance to make for this consideration; consequently, we shall let the estimate stand with the reservation that it may be somewhat too high.

[34] I have the more confidence in the estimate because of a check supplied by another source. The Division of Farm Finance in the Bureau of Agricultural Economics has recently made a study of mortgages on tenant farms in 24 counties distributed throughout the United States. The results of this study are not yet available for publication, but I am informed that they indicate a result not greatly different from that obtained by the above estimate.

[35] "Bank Loans to Farmers on Personal and Collateral Security," by V. N. Valgren and Elmer E. Englebert, Bul. No. 1048, U. S. Dept. of Agriculture. The figure is admittedly somewhat conservative, for a slightly larger proportion of city banks replied to the questionnaire than of country banks, while the latter would be expected to have a larger proportion of their loans and discounts in the form of loans to farmers. However, it is not believed that the error is very large.

were about 89.3 per cent of what they were in December, 1920. On this basis the probable figure is $3,455,813,034.

In addition to their indebtedness to banks on personal and collateral security, farmers owe money to merchants for food, clothing, implements, etc., and also to private individuals. Our information on these forms of indebtedness is of the most vague and unsatisfactory character.

The figure which I have employed for these items is $1,605,900,211. When added to the indebtedness to banks, a total short-term indebtedness of $5,061,713,245 is indicated. The estimate is arrived at by employing several different methods of measurement. The starting point was data on indebtedness from survey material concerning 1102 farmers already employed for other purposes. The data on indebtedness were classified by source of loans, in which bank loans were included. Since the last item mentioned has already been estimated on a fairly reliable basis for the nation as a whole, it constituted a point of departure in the use of the data and a criterion by which to judge of the adequacy of the resulting estimates. This made it clear that the absolute figures, being for the South, were too low when multiplied by the total number of farmers in each tenure class for the nation as a whole. It was found that the ratio to total farm capital less mortgage indebtedness also gave a figure too low for the nation as a whole. However, two other relatives gave results that seemed within the limits of probability. The first relative was determined as follows: The average indebtedness for each tenure class was multiplied by the total number in that class for the South as a whole. The ratio of the total indebtedness to the total value of farm property was ascertained and this ratio was then applied to the total value of farm capital for the nation as a whole. This gave a result of about $5,600,000,000. Another index was employed as follows: The ratio of bank debt for the known cases to total indebtedness was calculated. It was found that this was 70.99 per cent. Since the indebtedness to banks for the nation as a whole had been determined, it was thus possible to determine a figure for the remaining indebtedness. This made a total for all short-term loans of about $4,500,000,000. The final estimate employed is about half way between the two magnitudes.[16]

[16] Its reasonableness was also tested in the light of scrappy information available on store debts, cotton liens, and other forms of farm indebtedness.

We may now summarize the net worth of farmers as follows:

Assets	Total	Per Farm Family[1]
Farm capital owned by farmers	$63,818,090,465[2]	$ 9,897
Other assets	9,033,737,258	1,401
Total assets	$72,851,827,723	$11,298
Liabilities		
Secured by farm real estate mortgage	5,967,384,775	925
Short-term indebtedness to banks	3,455,813,034	536
Other indebtedness	1,605,900,211	249
Total liabilities	$11,029,098,020	$1,710
Net Worth	$61,822,729,703	$9,587

[1]Assuming number of farm families identical with the number of farms.
[2]$800,000,000 of cash to run the farm deducted in order to avoid counting it twice.

In order to make comparison with the nation as a whole, it is necessary to get these figures to a per capita basis rather than on the family basis. In 1920 for the first time the number of persons living on farms was ascertained, and was found to be 31,614,269. This figure has been employed to determine the per capita wealth of the farm population.[17]

Since the figure on farm population contains several million farm laborers, some addition to the net worth of the farming class should be made for them. I have no material for such an estimate, but have assumed that the average net worth of croppers as estimated in a later portion of this paper would be a fairly representative magnitude. This has been tested by survey data on wealth of farm laborers. The most probable per capita figure for the wealth of farm laborers appears to be $350. After considering carefully the problem of estimating the number of farm laborers who are probably independent accumula-

[17]This figure involves all of those farm laborers living on farms, and probably most of those living in the countryside. This is indicated by the large excess of males to females 109.1 males per 100 females for the farm population, as compared with 104 males per 100 females for the nation as a whole, including the farm population, or, say, roughly 101 to 100 for the population not on farms. Undoubtedly the farm population excludes the farm laborers who live in towns and go out to the farm to work. I have had the advantage of some detailed tabulations of farm population data for eight counties made by Dr. C. J. Galpin in collaboration with the Bureau of the Census. These tabulations indicate that the population living on farms but not employed in agriculture tends to offset the laboring population living in towns but mainly dependent on farming as an occupation.

tors of wealth, I have decided upon 2,083,394.[18] Multiplying this figure by an average of $350 per capita indicates about $700,000,000 as the wealth of farm laborers.

Adding this to the estimated net worth of farmers we have a total of $62,522,729,703 as the net worth of the farming class, or a per capita net worth of $1,978. It is interesting to compare this with the per capita wealth of the whole population. The wealth of the United States at a date approximating December 31, 1920, has been estimated by Mr. W. R. Ingalls at $290,909,285,628,[19] or about $2739 per capita. If we deduct the farm wealth and farm population from the totals of the Ingalls estimate, the remainders indicate a per capita wealth of $3060 for the population not engaged in farming.

In a paper on "The Net Volume of Saving in the United States,"[20] Dr. W. I. King estimates the material wealth at the beginning of 1919 at $294,145,000,000, or only about three billion dollars more than Mr. Ingalls' estimate for December 31, 1920. This indicates a national per capita average of $2820 for the total population, or approximately $3175 when we exclude people engaged in farming and the wealth owned by them.

While the figures are not precisely comparable as to time, each of the two estimates, the one made a year earlier and the other a year later than the estimate of wealth owned by farmers, indicates per-capita wealth about 50 per cent higher for the non-farming classes of the population than for the farming class.

5. The net worth of farmers by classes of tenure.

Since croppers and other tenants own comparatively little farm real estate and owe but little on farm mortgage indebtedness, I am

[18]The Census figure for farm laborers in 1920 is 1,700,000 lower than that for 1910. This great difference is probably due largely to the change in the date of taking the Census from April 1 to January 1. It is to be presumed that the diminution in number is largely through the elimination of the casual laborers dwelling in towns and also of those casual laborers in the country who would probably not be employed on January 1. The casual laborers from the towns probably should be excluded from the farming class, and the casual laborers dwelling on farms probably own little wealth not belonging to the farm family or to the family of a regular farm laborer who is the head of a family. Consequently, both may safely be left out of consideration for the present purpose. There remain, then, the 4,161,690 farm laborers given in the Census of 1920. The problem is to determine what proportion of these would probably be sufficiently independent of farm families already considered in this estimate to be accumulators of wealth on their own account. It seems probable that the great majority of women farm laborers would not be independent accumulators. The same conclusion probably applies largely to male farm laborers working on the home farm. While there are a small number in each of the two classes of laborers who are independent farm laborers, they are probably offset by the boys in the group working off the home farm who belong to farm families and contribute their incomes to the farm family budget. Subtracting the two groups from the total number of farm laborers leaves 2,083,394 laborers who may be regarded as probably accumulators of wealth.

[19]Ingalls, W. R., *Wealth and Income of the American People.*

[20]*Journal of the American Statistical Association,* December, 1922.

enabled to make a classification of farmers' assets, liabilities, and net worth by classes of tenure.

A. Croppers		*Per farmer*	*Per capita*[9]
Value of crops on hand	$ 66,969,204[1]	$ 119	$ 29
Other assets	172,220,872	307	74
Total assets	239,190,076	426	102
Liabilities	40,398,480[2]	72	17
Net worth	198,791,596	354	85
B. *Other Tenants*			
Implements and live stock	3,191,078,040[3]	1,685	404
Crops on hand, growing crops, miscellaneous supplies, cash to run the business	2,247,859,636[4]	1,187	285
Equity in farm real estate other than that operated by the farmers	1,279,544,720[5]	676	162
Other assets	3,639,716,386	1,922	461
Total assets	10,358,198,782[6]		
Less duplication of cash	254,160,000		
Net assets	10,104,038,782	5,336	1,279
Short term indebtedness	1,771,599,636[7]	936	224
Mortgage indebtedness	161,716,127[8]	85	20
Total liabilities	1,933,315,763	1,021	245
Net worth	$8,170,723,019	$4,315	$1,034

[1]One-half of the estimated amount of crops on hand as allocated to croppers on the basis of the ratio of value of farm land on cropper farms to value of all farm land.

[2]Based on actual study of indebtedness of croppers as of December 31. The study involved data from plantation books for about 300 croppers in Mississippi and Georgia.

[3]Less amount estimated to be owned by landlords who are not farming. (See above, p. 160.)

[4]The sum of the various classes of property (less amount owned by landlords) was distributed in accordance with the ratio of the value of all farm property in the two classes of farms.

[5]Determined on the basis of the ratio of the value of other farms owned to total assets, as shown by surveys of 1102 farms already referred to.

[6]The total duplication of $800,000,000 distributed on same basis that cash to run the farm was distributed.

[7]The total short-term indebtedness of farmers allocated on the basis of the ratio of the value of farm property in tenant farms to the value in all classes of farms. This may tend somewhat to exaggerate the indebtedness of tenants.

[8]This is mortgage debt on farms owned by the tenants but not operated by the owners. It is estimated by distributing the total mortgage debt owed by farmers in proportion to the amount of farm real estate owned by each class.

[9]The total farm population less an estimate of laborers not belonging to families of farm operators was distributed among the various tenure groups in proportion to the number of farms in each group, as reported by the Census of 1920.

C. *Part Owners*		*Per farmer*	*Per capita*
Real estate owned & operated	$5,181,179,964	$9,276	$2,223
Equity in farm real estate other than that operated	352,756,357[9a]	632	151
Implements and live stock	1,620,649,622[10]	2,901	695
Crops on hand, growing crops, miscellaneous supplies, and cash to run the business	949,260,009[11]	1,699	407
Other property	559,974,680[12]	1,002	240
Total assets	8,663,820,632		
Less duplication of cash	100,720,000		
Net assets	8,563,100,632	15,330	3,675
Mortgage indebtedness	698,780,757[13]	1,251	300
Short-term indebtedness	698,516,428[14]	1,251	300
Total liabilities	1,397,297,185	2,501	600
Net Worth	$7,165,803,447	$12,829	$3,075

[9a]Obtained in same manner as in case of tenants above.

[10]It is assumed that landlords have practically no equity in the implements and live stock of part owner farms. This assumption is approximately correct.

[12]Total of these items distributed in accordance with the proportion of the value of all farm property that is in farms of part owners.

[13]The total for owners and part owners distributed in ratio of number of farmers in each group and the ratios of the average amounts of each class of property per capita, as reported in local surveys employed above.

[14]Includes indebtedness on farms owned but not operated by owner. For distribution see note for corresponding item for tenants.

[15]Distributed in the ratio of the value of farm property on part owner farms to all farm property.

D. *Full Owners*[15]		*Per farmer*	*Per capita*
Real estate	$38,814,132,287	$11,300	$2,709
Implements & live stock	6,593,729,955	1,920	460
Crops on hand, growing crops, miscellaneous supplies, cash to run business	3,520,930,671	1,025	246
Other assets	5,461,825,320	1,590	381
Total assets	54,390,618,233		3,796
Less cash counted twice	445,120,000		31
Net assets	53,945,498,233	15,705	3,765
Mortgage indebtedness	5,106,887,891	1,487	356
Short-term indebtedness	2,551,198,701	743	178
Total liabilities	7,658,086,592	2,229	534
Net worth	$46,287,411,641	$13,476	$3,230

[15]The items for full owners have been obtained by subtracting the above estimates for the various tenures from the total estimates.

6. Significance of net worth as a measure of accumulation.

It is obvious that the net worth of farmers in 1920, amounting as estimated above to nearly $62,000,000,000 is not a complete measure of the economic progress made up to that date by the farming class. As pointed out by Dr. W. I. King in a paper referred to above, it does not include the intangible progress achieved in the form of education and other forms of personal improvement. Again, it does not include the farmer's share as a citizen in the public wealth of the nation, the states, and minor civil divisions. However, the farmer as a citizen shares in the liabilities, as well as in the assets of the government, and the liabilities probably exceed the value of all publicly owned assets.

It is also to be noted that the estimate of the net worth of farmers does not comprise all of the wealth saved by the farming classes in the past. A very large part of these savings is carried to town by farmers who retire. It may be roughly estimated that nearly half of the total farm property not owned by farmers is held by retired farmers, not to speak of the wealth in the form of other kinds of property held by this class. Much of the physical wealth is, of course, still in the countryside and contributes through taxes to the community welfare, but the ownership of this wealth accumulated in farming is carried out of the farming industry and out of the farming community through the process of retirement.[21]

Finally, it is obvious that the figure on net worth estimated above does not measure the savings of farmers out of production, as distinguished from wealth acquired through changes in values. A large part of it is comprised merely in a nominal increase of wealth arising from increase of land values. At first thought it might seem possible to allow for this element, but it soon appears that it is impracticable. In the first place, we do not know exactly how much of the present value of farm land represents actual improvements other than buildings, although it is probable that of the $26,000,000,000 of increase in the nominal value of land from 1910 to 1920, only a small proportion could be attributable to constructive additions to value. However, there is a very much greater difficulty. As the decades have passed farmers as individuals have had to acquire the ownership of their land. Some of this ownership has merely been transferred by inheritance or marriage, but a large proportion has been acquired by purchase. The purchase price has represented adventitious, as well as constructive, values, and the fulfillment of these purchases has re-

[21] It is true some wealth flows back for purposes of investment but it is largely in the form of loans to actual farmers and for the most part the lender does not accompany his wealth. Of course, there are relatively small sums carried into the farming industry through investments made by city people who move to the country to engage in farming.

quired hard work and the very real exercise of thrift. It is true, much of this transfer of land by purchase has been within the farming class. Much of it, however, has been repurchased from persons who have retired from farming or from city people who have inherited or acquired by marriage the ownership of farm land.

II. *Income Received by Farming Class*

1. Source of income.

Of the total net return of agricultural industry a part goes to the farming class, but also a large part is received by other classes who own farm property or who have made loans to farmers. Offsetting this in part farmers receive a certain amount of income from capital owned by them in industries other than farming. Since we have calculated the amount of farm wealth owned by other classes and the amount of wealth other than agricultural wealth owned by farmers, we need only an estimate of rates of return on the various kinds of wealth to calculate the amount of the net income from the farming industry received by those who are not farmers and the amount which is returned to farmers from investments in other industries.

First, we need the average percentage that rentals are of total farm real estate. As a starting point for this we have the study of the ratios of cash rentals to the value of farm real estate on about 175,000 cash rented farms made by the Division of Land Economics, Bureau of Agricultural Economics. For the cases studied an average figure of 3.55 per cent was obtained, and this figure was published in a preliminary report of the Division of Land Economics. However, when the rates for the cases studied are weighted in accordance with their regional importance as determined by the total value of farm real estate in the several regions, a probable ratio of 4.8 for the nation as a whole is obtained. A study of the ratio of share rentals to real estate values for a number of surveys which make such information available indicates an average share rental of about 6.5 per cent. Data for croppers and standing renters in the South were also obtained. Weighting the several figures by the relative number of tenants in each sub-class of tenure, we get a combined average rental rate of 6.3 cents. On these bases out of the total farm income there is paid in rentals to those who are not farmers $1,303,368,524.

The next item is the interest on mortgage indebtedness owed by farmers. According to the study of Farm Mortgage loans by Valgren and Engelbert, the weighted average interest rate on all classes of mortgage loans reported by 8,134 banks was 7.29 in March, 1921. In order to determine the probable interest rate on mortgages paid by

farmers in January, 1920,[22] an index number has been based on the average yields on municipal bonds for the three years 1917, 1918, and 1919 as compared with the average yield for March, 1921.[23]

On this basis it is estimated that interest rates on outstanding mortgages in January, 1920, averaged 6.4 per cent and at this rate farmers paid during the year ending on that date $381,912,626 as interest on mortgage indebtedness.

On this basis of reports from upwards of 9000 banks the average interest rate on short-term farm loans of $100 or more was estimated at 7.96 per cent as of March, 1921. It is necessary to obtain an index of variation to carry this figure back to January 1, 1920. Assuming as an index of variation the rate on 60-to 90-day commercial double-name paper in New York, the interest rate in January, 1920, was 78 per cent of what it was in March, 1921, or 6.21 per cent. Another index is supplied by the average rates for commercial, agricultural, and industrial paper of the Federal Reserve Bank of Kansas City for January 1, 1920, which would indicate a rate on short-term farm loans of 6.93 for January 1, 1920. Guided by these indices I have assumed an intermediate rate of 6¾ per cent. Accordingly the interest payment on short-term indebtedness may be estimated at $341,665,644.

Apparently, then, the total payments made by farmers to other classes on account of rent and interest approximated $2,026,936,794, or about $314 per farm.

If this was paid to other classes how much income was left for farmers themselves? If we knew the net value product of agriculture we could answer the question simply by subtraction. Time has not admitted of my attempting an original estimate, and I have taken the net value product of the agricultural industry, as estimated by Dr. W. I. King, of the National Bureau of Economic Research.[24]

According to the estimate by Dr. King (Vol. II of *Income in the United States*), the net return from agriculture to entrepreneurs and other property owners for the year 1919—the best year in terms of income farmers have ever enjoyed—was $13,335,000,000, and for 1920 it was $8,111,000,000. Now, we may regard our estimates of the value of farm property and the share of it owned by other classes as of January 1, 1920, to be applicable either to the year 1919 or

[22] It is necessary to recognize that since mortgage contracts nominally run from three to five years much of the mortgage indebtedness outstanding on that date had been contracted a considerable time previously.

[23] The rates are those reported in the *Survey of Current Business*, issued by the Department of Commerce.

[24] Since the original estimate was published some small revisions have been made. Of course, I can not employ the altered figures until they are officially issued by the Bureau, but I have been permitted to check them with the published figures. Apparently, the extent of the changes is not sufficient to impair the general significance of the magnitudes.

to the year 1920. That is, the estimate may represent the farm inventory for the end of 1919 or for the beginning of 1920.*

I have therefore deducted from the net value product of agriculture for each of the two years the estimated amount payable in rent and interest to other classes on the basis of the estimates made as of January 1, 1920. This would indicate net incomes for the farmers of $11,308,063,206 for 1919 and $6,084,063,206 for 1920. The averages per farm on this basis are $1754 for 1919 and $944 for 1920.

However, we have also to consider the return which farmers receive from investments outside of farming. According to the above estimates farmers owned in 1920 the following forms of property which might be sources of income:

Cash and bank deposits	$3,635,690,034
Stocks owned	1,015,710,491
Bonds owned	694,083,058
Town real estate	731,176,083
Bills receivable	1,651,999,911
Miscellaneous property	134,555,959

In the case of the bank deposits it is probable that income is derived only from time deposits. The Report of the Congressional Commission on Agricultural Inquiry (Volume on *Credit*) indicates that in May, 1920, time deposits were 37.7 per cent of all deposits in upwards of 2000 counties classed as agricultural. Assuming an average rate of 3 per cent on time deposits we get an indicated income from this source of $41,119,653. Assuming an interest rate of 4 per cent on the total holdings of bonds would give presumptive income from this source of $27,763,322. These two items amount to $68,882,975. The remaining items of wealth are problematical as sources of income. Probably a large proportion of town real estate consists of vacant lots or other unproductive property. Bills receivable include mortgages owned by farmers, but also probably a large amount of non-interest bearing credits arising from sales of farm products or property on deferred payments. Most of the miscellaneous property is probably non-income yielding, since the more important classes of probable income yielding property have already been considered. It is possible that the several items mentioned might add as much as $150,000,000 to farmers' income but it seems much more probable that they would not add more than a third to half of this amount. Hence, it appears

*I should prefer to have estimates for both the beginning and end of each year. Indeed it would be possible to project the present estimates backward or forward on the basis of price indices, but it may be questioned whether we have indices sufficiently accurate so that we would gain a great deal by such a refinement. Moreover, it would also be necessary to project forward and backwards the estimated rates of return on property.

that altogether from all of these outside forms of property the total income received by farmers is between $125,000,000 and $150,000,000; and therefore that it added not more than $20 to the average income per farm family, increasing the average to $1774 in 1919 and to $964 in 1920.

When we add farm laborer population to farm operating population, making allowance also for the wages of farm laborers, we obtain an estimate of per capita income of the farming population in 1919 amounting to $409 and $244 in 1920.

Since the estimate of national income by Dr. King of the National Bureau of Economic Research has thus far been carried only up to 1918 it is desirable for comparative purposes to reduce our estimate of the per capita income of farmers to a 1918 basis. Taking Dr. King's figures of the net value product of agriculture in 1918 as a starting point, I have made the following estimate of the comparative income per capita of farmers and other classes:[26]

	Per capita income, 1918.	Per cent of total income, 1918.
Farm population	$359	18.46
Other classes	677	

2. The range of income.

Statistics of average income per capita alone, while furnishing a basis of comparison with other classes of the population, cannot give us a correct impression of the possibility of accumulating wealth from income unless we know something about the range of income.[27]

I am fortunate in having data from seven local surveys which give the actual incomes received by 1300 farmers. Two of these surveys

[26] I have reduced the income received by other classes on account of capital invested in agriculture to a 1918 basis by assuming that it bears the same ratio to the corresponding items for 1920 as the ratio of agricultural capital in 1918 is to that of 1920. The small items for income received by farmers from ownership of property not invested in agriculture has been reduced to a 1918 basis by employing the same ratio.

It should be noted that the above figures on income are for actual income and not labor income.

[27] On this point we have had little information in the past. In the volume on *Income* published by the National Bureau of Economic Research Dr. Knauth has attempted a division of incomes of farmers between those under $2000 and those over $2000, using the reported cases of income to the Bureau of Internal Revenue and distributing the remaining estimated income between the two groups on the basis of data on actual incomes from farming for 400 cases supplied by a survey in New York made by Cornell University.

Unfortunately most of the rather abundant data obtained from local surveys of farm income cannot be employed for this purpose.

are in the North and three in the South. I have arranged the individual cases in groups having a group range of $500.[2]

I propose to use the combined results of these surveys to distribute the national income of farmers for 1919 and 1920, as estimated above. In doing so I realize that the basis of distribution is rather narrow, but it is the best we have, and a careful study of it leads us to believe

RANGE OF INCOMES RECEIVED BY FARMERS, 1919, 1920.

Income Range.	Per cent of Farmers	Per cent of Income	No. of Farmers Jan. 1, 1920 (Thousands)	Amount Income Received in 1919 (Millions)	Average Income, 1919 Current dollars	Amount of Income Received 1920 (Millions)	Average Income, 1920 Current dollars
Negative Income	4.55	....	293	Loss	Loss	Loss	Loss
0 - 500	12.53	2.3	808	263.2	326	143.0	177
500 - 1000	21.89	9.0	1,412	1,029.9	729	559.7	396
1000 - 1500	17.01	11.2	1,097	1,281.6	1,168	696.5	635
1500 - 2000	14.69	14.2	947	1,624.9	1,716	883.1	933
2000 - 3000	13.31	17.7	858	2,025.4	2,361	1,100.8	1,283
3000 - 4000	7.66	14.4	494	1,647.8	3,336	895.5	1,813
4000 - 5000	3.25	8.0	210	915.4	4,359	497.5	2,369
5000 - 7500	3.17	10.3	24	1,178.6	5,777	640.6	3,150
7500 - 10000	0.93	4.4	60	503.4	8,390	273.6	4,560
10000 - and over	1.01	8.5	65	972.7	14,965	528.6	8,132

that it gives a fairly good indication of range of income received by farmers.[3]

It is a very striking fact that in 1919 approximately 70 per cent of the farmers were in groups averaging $1716 or less, while in 1920 70 per cent of the farmers were in groups averaging $933 or less. Approximately 40 per cent of the farmers belonged to groups averaging $729 or less in 1910 and $396 or less in 1920. Over one-sixth of the farm population were in groups that had average incomes of $326 or less in 1919 and $177 or less in 1920.

What standard of living should be maintained before savings become possible must be largely a matter of opinion—perhaps largely a matter of sentiment. The figures do indicate a substantial group

[2]It should be said that the southern surveys were for the year 1919 and the northern surveys for the year 1918. Both were relatively good years from the standpoint of the incomes from farming. The southern surveys show a considerably greater income range than do the northern surveys, for the former reflect the speculative conditions prevailing in the Burleigh tobacco region of Kentucky and cotton producing regions of Tennessee and Texas.

[3]It should be noted that I have not used the absolute amounts of income, but have calculated the percentage of total income in the surveys received by a given percentage of the farmers. These percentage figures, rather than the absolute incomes indicated by the surveys, have been used to find the range of the national incomes.

of farmers with incomes adequate for some accumulation. If we draw the line at average incomes of $1700 to $1800, we find 44 per cent of the farmers above this line in 1919 and but 16 per cent in 1920. It should also be recognized that some of the lower groups contain a considerable number of young men just getting a start who by superior ability will rise to the higher income classes, but largely by taking the places of other members of those classes who are dropping out. Broadly speaking, the figures suggest that the accumulation of wealth in agriculture would be a very slow process without on the one hand the practice of rigid and painful thrift or on the other hand the fortunate incident of rising land values. If the latter tendency should cease there is reason to believe that the rate of accumulation among American farmers would approximate very much more closely to those rates of accumulation in Europe which require the savings of several generations to pay for a farm.

INCOME OF FARMERS—DISCUSSION

O. E. Baker.—The general conclusions of Dr. Gray's study, that the per capita wealth of the farming population is about two-thirds and the per capita income in 1918 about one-half that of the total population of the United States, are confirmed by previous less complete studies of the subject, and may be accepted, I believe, as approximately correct. Certain details, however, particularly the amount of non-farm property owned by farmers and of farm property owned by non-farmers, it should be recognized, are based on meagre data derived from surveys not well distributed geographically from the viewpoint of representing the United States as a whole.

Since Dr. Gray's conclusions are inherent in his data, perhaps this discussion may be devoted most profitably largely to comment concerning the character of the basic data.

The estimates as to the wealth of farmers are based on the results of the recent census, supplemented by the answers on questionnaires received from 25,000 owners of rented farm land, well distributed throughout the United States, and supplemented further by the results of a series of economic surveys made by the Divisions of Land Economics and of Farm Management in the Bureau of Agricultural Economics. Much of the census data have been available heretofore, but the data secured from the questionnaires sent to owners of rented farms and that derived from the farm surveys are entirely new and essential to the determination of the wealth of the farming class. In particular, these surveys provide data on four points concerning which there has been incomplete or no information heretofore:

1. How much farm wealth is owned by farmers and how much by persons who are not farmers?
2. How much non-farm wealth—city property, bonds, stocks, etc.—is owned by farmers?
3. The debts and obligations owed by farmers to non-farmers.
4. The distribution of farm wealth among the several tenure classes—that is, how much wealth, both farm and non-farm, is owned by owners of farm land, by tenants, and by farm laborers.

All that the census provides is the value of farm land, buildings, machinery, and live stock, and although this information is basic, it affords only partial answers to questions 1, 3, and 4, and no indications even of an answer to question 2. On the other hand, the census figures are complete so far as they go, in that they include practically every farm in the United States.

The questionnaire data, although much smaller in extent, were received from almost every county in the United States, and appear to be reasonably representative.

The farm surveys cover many more items than the census or the questionnaires, but the number of farms included is meagre and not well distributed geographically. Those made by the Division of Land Economics, and used as a basis for estimates of the non-farm wealth of farmers, are confined to the states of Texas, Tennessee, and Kentucky. The surveys include, however, wide differences in systems of farming—cotton production in the Black Prairie of Texas and in Jackson County, Tennessee, general farming

and live-stock production in the Nashville Basin of Tennessee, tobacco production, live-stock and general farming in the Blue-grass district of Kentucky, and tobacco production combined with general farming in Montgomery County, Tennessee.

The surveys made by the Division of Farm Management, used as a basis in estimating the amount of operating capital by tenure classes, cover areas in both northern and southern states, but not enough to assure their representative character. However, the errors resulting from the meagreness of these survey data are not serious, for the reason that the items derived from these surveys constitute so small a portion of the farmers' wealth that a large error in these figures could produce only a small error in the final result. Moreover, the data have been used largely as relative indices and not as absolute per capita quantities. This has undoubtedly greatly reduced the margin of error.

Another matter deserving notice is the large proportion of farm property owned by non-farmers—33 per cent of the land, 25 per cent of the value of the buildings, or of total real estate 31 per cent, and of all farm assets 25 per cent. This is surprisingly large until one realizes that Dr. Gray has included among non-farmers all retired farmers. Unquestionably this is the correct thing to do, since most of these retired farmers have moved to town, and are spending their income from the land in building up urban wealth. But in using these figures it should be recalled that there is little absentee ownership of farm land in the United States, in the sense the term is usually used, and that these retired farmers take a keen interest in their farms and often participate in their operation.

The second part of the paper deals with the income of farmers. Dr. Gray starts with Dr. King's figures on income, which are derived from the value of the total product of the agricultural industry. Dr. King was unable to separate that portion of this total product which went to farmers from that which went to non-farmers—that is, to urban owners of farms, of farm mortgages, etc. Dr. Gray was able to make this separation on the basis of the questionnaire and survey data. The estimates, consequently, are subject to the same criticism as that already made concerning the estimates of wealth.

Among the valuable information furnished by these surveys is the range of income, that is, the proportion of the farmers who receive incomes of certain amounts. The amounts of these incomes will vary, of course, from region to region and from year to year, but the relative amplitude of the range of incomes is probably representative of any region and of almost any year.

Coming now to the significance of the estimates, the abnormal conditions existing on the date necessarily selected deserve further emphasis. The value of farm property on January 1, 1920, the date of the census, was fully 25 per cent greater than it is today; and the income of farmers in 1919 was probably nearly 100 per cent greater than in 1922. Dr. Gray has corrected to some extent the estimate of income for this abnormal year by calculating the income for 1918 and 1920 also. Farm incomes in 1922 are not far different, probably, from those in 1920.

In conclusion may we ask the question, why the per capita wealth and income of farmers continue so much smaller than the averages of other occupations? Are farmers less productive, indeed, only about one-half as productive as city people? The American farmer produces more probably than any other farmer in the world—undoubtedly, relative to urban workers, his efficiency is greater than that of farmers in foreign countries. Each American farmer and farm laborer feeds, on the average, nine people other than himself in this country and one more person living in foreign lands. His efficiency, moreover, increased fully 15 per cent between 1910 and 1920 —certainly a greater increase in efficiency than can be claimed for urban labor.

One of the reasons for the farmers' small income is to be found, perhaps, in this increase in efficiency. In most occupations the more a man produces the more he receives in return, but with farmers, as a class, frequently the more they produce the less they receive. A big crop is usually worth less than a small crop.

American farmers have been producing a larger surplus in recent years than ever before. Part of this surplus is due to diminished domestic per capita consumption, as well as to increased production. The farmers are beginning to correct this unbalanced condition by letting crop land lie idle or using it for pasture, by letting some pasture land revert to forest, and by moving to the city in twice the normal numbers. Farmers do not like to restrict production—it violates their moral traditions—but they are being forced to do so because of lack of capital to hire labor and pay for machinery. The aggregate production of the ten leading crops (about 85 per cent of the total crop acreage) was 12 per cent less in 1921 than in 1920, and 6 per cent less in 1922. Prices of farm products are rising and the conditions are somewhat improved.

John D. Black.—We must feel grateful to Dr. Gray, Dr. Friday, and for that matter also to Dr. King of the National Bureau of Economic Research, for the work which they have done on farmers' incomes. It is a matter upon which there is a vast amount of confusion. Some of this is due to careless terminology. He who plays with a word so common as "income" must expect the public to have its own way in understanding it.

Dr. Gray and Dr. King have gone to the only sources of data available. Out of census data and fragments here and there in the files of the United States Bureau of Agricultural Economics, they have built up in an ingenious and masterful manner a set of estimates which we can look upon as reasonably dependable. The estimates are probably about as serviceable for most of the uses to which such data are put as they would be with half their present error.

The United States Bureau of Agricultural Economics has in its files the so-called "labor incomes" of over twenty thousand farmers. A great deal of time has been spent in calculating these incomes. Scores of experiment station workers in the various states have coöperated in compiling these income figures. They are constantly being used in farm journals,

in editorials in the daily press, and even in the popular weeklies, as evidence upon the subject of farmers' incomes.

It is therefore interesting to note that Dr. Gray, coming to us directly from the haunts of these labor-income figures, does not even use them as fragmentary evidence. The workers in the National Bureau of Economic Research likewise ignore them. President Friday ignores them; he also found them of no value to him in his work for the Treasury Department on agricultural incomes and savings.

The conclusion from this is that "labor-income" data can serve very little as evidence as to the incomes of farmers. If the general public could be converted to this same way of thinking, one chief cause of confusion on the subject would be removed. As a matter of fact, the labor-income concept was developed for an entirely different purpose, as a measure of the relative efficiency of the farmers in a given locality. In the popular mind, however, an income is an income; and the popular mind is too powerful to be gainsaid by the occasional weak protests of research workers.

As incomes, the labor-income figures are always too low. They fail to include some important sources of income, make one substraction which should not be made, and make another on the wrong basis. Even if one could go back to the original schedules, he could not quite convert a labor income into a true income figure. Making allowance for these differences, however, they can be roughly reconciled with Dr. Gray's figures.

The most obvious comment to make on Dr. Gray's results is that they are after all only averages; and an average figure for the whole United States does not help us very much. This must not be taken as criticism—the job had to be done first of all for the United States as a whole. It was a big undertaking at that. What we need to do now is to work out such incomes for our different classes of farmers separately, our cotton farmers in one group, our Corn Belt farmers in another, etc. Dr. King's studies show that in 1919, an unusually prosperous year in the South, farmers' incomes in the South were about one third of those in Illinois, Iowa, and Nebraska. It will not be possible to do as good a job by states and counties as Dr. Gray has done for all combined—some of the data are not available on this basis—but we must do it! Else we shall presently have our farm journal editors citing these averages based on six and a half million farms, of which nearly three millions are in the South, predominantly one-mule farms, part with negro operators, half with tenant operators —over a third of whom are croppers—as proof of the woeful state of agriculture in New York, Indiana, Minnesota, Kansas, California, and the whole United States. Dr. Gray's curve of distribution of incomes, with its heavy massing on the lower income groups, shows the effect of these southern farmers. Here is a fine example of a case where one cannot reason from the general to a particular.

This is more strikingly true when comparisons are made—as they are sure to be made—with urban incomes. In any one southern state, farmers' incomes are likely to compare not unfavorably with incomes of the same grade of workers in the industries and commercial pursuits. In any one northern state, the same thing is likely to be true. But when the two are

averaged, lo! we get a peculiar result, for the farmer class is weighted heavily in the South with its low incomes in general, and the industrial and commercial classes are weighted heavily in the North, where incomes are much higher in general.

A peculiarly bad example of this fallacy is found on page 2 of the 1921 *Yearbook of the United States Department of Agriculture*. It here appears that the 28 per cent of gainfully employed of the United States living on farms received only 18 per cent of the national income. Except for the fact that the 28 per cent include nearly two millions of boys and girls under twenty years of age, one and a half million of these under sixteen, that would not be counted as gainfully employed in cities, which would reduce the percentage only from 28 to 24, the comparison is no doubt true so far as its arithmetic is concerned. But what would such a comparison show for Illinois taken by itself? Or Georgia?

Must the agriculture of the United States, before we can call it prosperous, lift the whole South on its shoulders, with its nine millions of negro population, its general economic backwardness?

In saying that comparison of urban and rural incomes by individual states in most cases in normal times—not just at present—would prove not unfavorable to agriculture, I am presuming two things which I am sure anyone will accept as reasonable: (1) The comparison must be for the same class of workers. There are a few farmers who have as great natural ability as the first-rate professional men and the commercial and industrial heads in our cities; but very seldom have they likewise sacrificed the early years of their lives in getting ready to earn an income. The modal group of farm operators hardly reaches in natural ability and training the modal group of the skilled trades. (2) The incomes of farmers and city workers must be divided by a relative of the comparative cost of living for comparable grades of workers in the country and the city. Such a pair of relatives is difficult to make. The budget items are different. One method is to compute the cost on the farm and in the city of a representative budget for each. But this does not take account of possible differences in the scale of living. A better plan is to build up two budgets as nearly comparable as possible as to scale of living but with different items. The arithmetic of the second plan is not so good, but the conclusions reached will be more valid. At least half of the farm family's budget consists of things furnished on the farm, which must be valued at farm prices. We are not likely to have such indices for some time, but in the meantime we must be ready to admit that farm incomes are bigger than they seem.

The most significant figures in Dr. Gray's paper are the average net worths of full owners and part owners, $13,476 and $12,829 respectively. These figures indicate that the farmers of the United States, who own the land, or part of the land, which they operate, after all mortgages and other debts were substracted, taken altogether, East and South as well as North and West, were worth in 1919 an average of over $13,000; and this is at an average age probably not far from fifty years. Coupled with this the other circumstance that where less than 40 per cent of the farms are rented—and this includes the whole United States outside of the South

and four states, (Illinois, 42.7, Nebraska, 42.9, Iowa, 41.7, and Kansas, 40.4)—relatively few farmers, and those the very incompetent or the unfortunate, have thus far been unable to rise from tenancy to ownership. Recent field studies in some Corn Belt territory have indicated that a permanent tenant class is beginning to appear; but an average farm in Iowa in 1919 was worth $31,000, and its equipment another $9,000. It is expecting a good deal of agriculture even in prosperous Iowa that it will enable every man to own a farm worth $31,000 before he retires.

There is, however, another side to the picture. In accumulating this wealth, farmers have probably as a class denied themselves more than most other classes with like incomes. The institution of private property in land is partly responsible for this. Another reason is that part of the results of the farmer's efforts embody themselves directly in additions to capital, in increases in live stock, land improvements, and the like. Only by borrowing against such increases can many farmers spend freely for consumption. The automobile has, however, recently taught many farmers how to do this.

Still another reason for the accumulation is the better utilization of the whole family which is possible on a farm.

At first thought, there is an apparent inconsistency in Dr. Gray's and Dr. Friday's conclusions. Dr. Gray says that the farmers would really have accumulated very little wealth except for the increase in land values; and Dr. Friday concludes that farm incomes have increased about 30 per cent since 1900. If their incomes have increased, why have they not accumulated wealth? The answer is—because they have lived better. The automobile, for example, has come to the farmer during this period. The other possible answer is that Dr. Gray has understated the farmers' real accumulation of wealth. The equipment of the ordinary farm in buildings, live stock, and machinery has increased considerably since 1900. In Minnesota, for example, there has been since 1880 an increase of over 100 per cent in machinery per farm, of 50 per cent in horses per farm, and 40 per cent in improved land, not to mention cattle, hogs, and sheep.

Nor, in talking about the accumulation of wealth, must we forget the steady stream of wealth that is being carried from the country to the city by retiring farmers, by heirs now living in the city, and in the form of cash and share rents. The backflow is a mere trickle compared with this.

It is the fashion just now to decry the condition of the farmers. This makes it necessary to distinguish clearly between long-time effects and the present emergency. Dr. Gray does this very well, except that he might have pointed out that the values embodied in the average net worth of $13,476 have shrunk considerably since then—perhaps a fifth. Dr. Friday should have recognized more pointedly the present discrepancy between farm and wholesale prices of farm products. The Bureau of Labor's index number for wholesale prices of farm products was 145 for December; the Bureau of Agricultural Economics' index for farm prices of farm products was 112 for December. This much difference do higher freight rates and middlemen's margins make.

DO PRINCIPLES OF LARGE-SCALE PRODUCTION APPLY TO MERCHANDISING?

By L. D. H. Weld
Chicago, Illinois

Economists have considered the problem of large-scale production mainly in connection with manufacturing enterprise. They have also referred to transportation, mining, and agriculture. They have found that there has been a decided tendency toward larger and larger production units in the industrial field. They point out that some forms of enterprise, like custom tailoring and artistic work, are exceptions. Agriculture is also an exception. They tell us about the economies of large-scale production, and how, in many important industries, the expense decreases as the size of the business unit increases. They also point out modifications, such as the principle of diminishing returns after a certain point is reached in the application of labor and capital, and how in most industries there is a most efficient size unit.

But the application of these principles to the selling end of business, a field of economic activity which includes millions of merchants and investments of hundreds of millions of dollars, has had very scant attention. This is only one instance of the neglect that this important field has suffered at the hands of economists.

Briefly stated, the "principles of large-scale production" are taken to mean in this paper merely the fact that there is a tendency for expenses to decrease as the size of the industrial unit increases. Do these principles apply to the selling process? This is an important and fundamental question, and one on which there appears to be some difference of opinion.

From *a priori* reasoning, one would naturally expect that costs would decrease with size. Professor Taussig had to use this method of reasoning when he wrote his *Principles of Economics* because there were practically no data available. He said:[1]

> Mercantile operations themselves, and especially wholesale operations, are carried on more economically when on a large scale. Expenses for clerk work, rentals of office premises, and the like, which constitute the main outlays of the wholesale dealer, are no greater for large transactions than for small.

Again, he says, in speaking of the disposal of a manufacturer's output:

> All the apparatus for drumming up custom—traveling salesmen, trade catalogues, and the like—is the more effective, and the less costly per unit of product, in proportion as it operates on a large scale.

[1] Vol. I, p. 54.

Although there is much that is sound in these remarks, Taussig would undoubtedly have modified them considerably if he had had available certain figures on operating costs that have been collected since he wrote his book. And this leads to the consideration of certain indications that operating costs are larger for big wholesalers and retailers than for small ones. Department stores, for example, have heavier operating costs than small specialty stores. Figures on various kinds of retail stores indicate that expenses are higher for large stores than for small ones. Most of the wholesale figures that are available indicate higher expenses for large houses than for small ones. In fact, Nystrom, one of our leading authorities, said in his *Economics of Retailing*,[2] written in 1915:

> Retailing is different from most other businesses in this respect, that the small store can usually be conducted at a lower cost than a larger store. Unless other advantages, such as in buying or in advertising, may be gained to offset the increasing expense of the large establishment, there is nothing to be gained by increasing the business of a store beyond a certain point that keeps a small institution busy.

When Nystrom wrote this he commented on the serious lack of data on retail expenses, and if he were to rewrite this part of his book today, he also would undoubtedly introduce many modifying statements. But Clark, in his excellent book, *Principles of Marketing*, published in 1922, although he refers to the advantages of large-scale retailing, and suggests the possibility of lower operating costs if there were fewer stores, each with a larger volume of business,[3] also says:

> Again, it is not at all evident that large-scale retailing is more efficient in so far as the costs of operation are concerned. In fact, the costs of selling in department stores and large stores generally, with the possible exception of chain stores, are thought to be greater than the costs of small competing stores when efficiently operated.

Furthermore, recent data that have become available emphasize the complexity of the problem. Retail operating costs in some trades show a tendency to decline as volume increases from small stores to medium-sized stores, and then to increase for very large stores. There seems to be a tendency toward rising costs for bigger stores in some retail trades, as, for example, in men's clothing stores; and a tendency toward lowering costs in other trades, as, for example, those shown by the Department of Agriculture study of the retail meat trade. The A. W. Shaw Company for 1917 showed higher costs for the larger houses in four wholesale trades, including groceries, whereas the Harvard Bulletins on wholesale groceries show a slight tendency toward decreasing costs for 1920, and a slight tendency in the opposite direction for 1921.

The writer fears that by this statement of the complexities of the

[2] P. 334.
[3] Chaps. 11, 12, and 25.

problem he is placing himself in the position of the dramatist who concocts an absorbing plot, replete with complicated and unusual situations, but who allows the play to fall flat in the last act because of his inability to unravel the situation with a logical and satisfactory denouement. As a matter of fact, there are not enough reliable data at hand to come to a final solution on this question. On the other hand, the writer will hazard conclusions on some points, which he thinks will stand, whereas on other points he will utter more or less tentative conclusions, hoping that other students will continue research work on this subject.

First, let us limit our problem by confining it to a comparison of operating costs in different units of a given trade and system of marketing. This eliminates all consideration of the merits of chain stores and mail-order houses as compared with the ordinary type of merchandising through individual stores. It also eliminates comparison of department stores with individual shoe stores, grocery stores, etc. Likewise, large coöperative marketing organizations will not be compared with individually owned marketing agencies. In other words, the question we shall consider is whether, in any given trade or type of merchandising, there is a tendency for costs to decrease as the volume of business increases.

Now let us examine some of the figures on retail stores and see what we can make of them. The cost of doing business is expressed as a percentage of net sales.

Sales		Cost of Doing Business
	Department Stores 1921[1]	
Less than	$ 250,000	26.6
$ 250,000 to	500,000	27.6
500,000 to	1,000,000	28.3
1,000,000 to	2,500,000	28.7
More than	2,500,000	28.5
	Retail Jewelry Stores 1920 and 1921[1]	
	1920	
Less than	$ 25,000	34.1
$ 25,000 to	50,000	32.6
50,000 to	100,000	30.1
More than	100,000	32.8
	1921	
Less than	$ 20,000	47.1
$ 20,000 to	50,000	41.6
More than	50,000	40.6
	Retail Shoe Stores 1920[1]	
Less than	$ 30,000	25.0
$ 30,000 to	50,000	24.3
50,000 to	100,000	23.5
100,000 to	250,000	26.6
More than	250,000	29.6

[1]Harvard figures.

Sales		Cost of Doing Business
Retail Groceries 1919[6] (Madison, Wis.)		
Less than	$ 20,000	14.6
$ 20,000 to	50,000	10.6
50,000 to	100,000	9.8
More than	100,000	13.1
Retail Meat Stores 1919[6]		
Less than	$ 25,000	18.11
$ 25,000 to	50,000	17.41
50,000 to	100,000	15.33
100,000 to	200,000	15.55
More than	200,000	14.47
Retail Clothing Stores 1919[7]		
Less than	$ 40,000	19.00
$ 40,000 to	80,000	18.12
80,000 to	180,000	20.52
More than	180,000	24.03

The most striking features of these figures are as follows:

1. Department stores show practically a continuous increase in expense as the size of store increases.

2. All classes of stores except department stores show an unmistakable decrease in expense as the size increases from very small stores to medium sized stores.

3. All classes of stores except meat shops show a definite increase in expense for very large stores, as compared with medium sized stores. The turning point from decreasing expense to increasing expense appears to be when sales exceed $100,000 a year. For clothing stores the turning point is reached in a smaller size group.

4. In only one trade, the retail meat trade, do expenses decrease without interruption as the size increases.

What conclusions may be drawn from these facts?

First, it seems safe to conclude that in ordinary retail stores there is a marked tendency for expenses to decrease as we advance from small stores to medium-sized stores, but that a point is soon reached where the expense begins to increase with the size of the store. This is in keeping with the general idea about large-scale production, namely, that after a certain size is reached unit expenses increase rather than decrease. But there is one important question to ask in this case: Are we sure that the higher operating cost in the largest stores is due to size alone? May it not be due to a different kind of service rendered?

To throw light on this, we must examine itemized expenses for different sized groups. This is not so easy to do, because there is a lack of data. But some generalizations can be made.

[6] Macklin and McNall, "What the Retailer Does With the Consumer's Dollar."
[6] Preliminary Report of the U. S. Department of Agriculture.
[7] Northwestern University figures.

For example, it appears that in retail shoe, jewelry, grocery, and meat stores, the expense for wages and salaries per $100 of sales tends to decrease for larger stores. In clothing stores and department stores, it tends to increase. In those trades for which there are figures, advertising expenses increase with the size of the store. So do delivery expenses, and supplies, such as boxes and wrapping paper, although only a few figures on this item are available. Buying, management, and office salary expenses also tend to increase. Rent and interest both tend to decrease, except that in some trades rents for the very large-size groups show an increase.

These facts, together with others brought out below, suggest that the higher cost of doing business in large retail stores is due in large part to superior service, in the form of better salesmen, better selection of merchandise, better wrapping and packing, more attractive and convenient locations, better and more extensive delivery, greater liberality in the way of returns and allowances, etc. Closer examination of the available data seems to bear this out.

In the first place, consider the clothing trade, on which we have far more complete data than on any other trade, thanks to the Northwestern University Bureau of Business Research. Expenses and other items that increase with the size of the store are as follows: average price of suits sold; charge sales; value of outstanding accounts; value of returned goods; general expense (which includes many items such as delivery, office supplies, wrappings and containers, allowances, elevator expense, etc.); advertising; rate of stock turnover; and gross trading profit. Average sales per full-time salesperson also increase, but so do wages and salaries, indicating that perhaps a higher class of personnel is employed. Some items that decrease with size are rent, cost of merchandise, inventories, and net profit (considered in terms of sales).

It will be observed that many of the items that show increases for the larger store groups have to do with service. Analysis of the Harvard department store figures suggests the same thing. On the other hand, the figures on retail meat shops, where there is no marked increase in quality of service in large stores, show a continuous decrease in expense as we pass from smaller to larger stores.

Support is also gained from the Harvard figures on retail shoe stores,[1] where expenses are given for three groups of stores—those handling low-priced, medium-priced, and high-priced shoes. The cost of doing business for stores handling high-priced shoes is nearly 8 per cent of sales higher than for the other two groups. It also appears that these three groups comprise groups of different size. The common figures for volume in stores handling low-priced shoes were

[1] Management Problems in Retail Shoe Stores.

$20,000 a year; in stores handling medium-priced shoes, $30,000 a year; and in high-priced shoe stores the volume ranged from $175,000 to $500,000 a year. One might infer that the higher operating cost in the high-grade shoe shops was due to volume; but there is such a pronounced increase in salaries of sales force, buying expense, delivery expense, and losses from bad debts, that one is forced to conclude that the higher cost of operating the large, high-grade shoe store is due to higher-grade salesmen, who spend more time on each customer, better selection of stock, and more elaborate service in general. One only needs to call to mind some of the high-grade, high-priced shoe stores in our large cities to realize that this explanation is plausible.

It appears, therefore, that the stores in different sized groups are not necessarily comparable with each other at all. It is surely impossible to compare a small, ordinary neighborhood store with a large store giving elaborate service, and conclude that the higher cost of doing business in the large store is due to its size. These facts point to the conclusion that the principle of decreasing costs applies to retail merchandising to a much greater extent than our first examination of costs by size groups seemed to indicate. In fact, it is probably safe to say that of two stores in similar locations, carrying the same variety of stock, giving the same quality of service, and delivering over the same area, the store having the larger volume of business will have the lower operating cost. This is borne out by a statement obtained from a chain-store company to the effect that the operating cost for stores within the system decreases as volume increases.

Figures on operating costs, expressed as a percentage of sales, fail to throw light on one important advantage that a large store may have over a small one, namely, its ability to buy merchandise at lower prices. It is difficult to get a statistical measure of this advantage, although the Northwestern study on retail clothing stores shows definitely that there is a decrease in the cost of merchandise for large stores as compared with small stores. The Harvard figures on department stores and the Northwestern figures on clothing stores both show a substantial widening of the gross margin between purchase price and selling price for large stores as compared with small ones, indicating that they either sell at higher prices or buy at lower prices than small stores. There is no doubt but that this wider margin is due in part, if not almost wholly, to lower buying prices. There are also figures which show that the large stores take cash discounts more frequently than small stores. At any rate, the fact that large stores can buy at lower prices than small stores indicates that the principles of large-scale production apply to merchandising more than analysis of figures on operating costs would indicate.

But it must not be inferred from what has been said that the higher cost of doing business in large stores is due entirely to more elaborate service. The increase in advertising expense, as well as the increase in buying, management, and office salary expense, suggests that there is something inherent in mere size which results in heavy expenses. It must be remembered that on the whole the retail business is one of relatively small units, and that it must always remain so because most stores must be located within convenient reach of customers. This means that if a retail store is to increase its volume it must do something to attract trade from a wider area, or procure a site in the heart of a city, where prospective customers in large numbers are available. Even in such a location more or less advertising is necessary, but this tends to decrease other selling expenses, and to increase the average sales per salesperson. It also appears that in conducting such a store a higher quality of managerial ability is necessary. Furthermore, when a business becomes large enough to require departmentization, more expense must be incurred for supervision, and there is probably greater difficulty in maintaining efficiency among the employees.

The head of a well-known department store says on this point: "In the large store the heads of the business are so far removed from the actual operations in most instances that it is necessary for them to employ supervision for the different branches of the work, and then supervision of the supervision, and so on in a long chain of responsibility." He says that this not only adds greatly to the cost of doing business, but that efficiency of subordinates is more difficult to maintain, because they naturally do not have a vital personal interest in the success of the business. He believes that the principal advantage of the large department store is its ability to purchase merchandise at lower prices than the small store.

It must also be remembered that superior service is in many cases a necessary concomitant of volume. In other words, in order to get volume, it is necessary to give more elaborate service. This is not always true, as is indicated by the success of many large department stores and food shops, which do not go in for elaborate service. But the giving of such service is one way of attracting customers and has been one reason for the growth of many of our leading department stores.

These considerations, therefore, modify our conclusions up to this point. We have seen that within certain limits there is a definite tendency for operating costs to decrease as the size of the retail unit increases, and that the tendency for operating expenses to increase in very large stores is due in part to rendering of superior service. Large stores also have an advantage in purchasing. There is a point,

however, beyond which a retail store cannot go without incurring additional expenses in order to attract customers and to provide proper management and supervision in a departmentized business. The point where overhead costs begin to increase with the size of the store is apparently reached in relatively much smaller units in retail trade than in most manufacturing industries. It may pay a retail store to go considerably beyond this point because it has an advantage in lower buying costs, and large stores invariably have a more rapid rate of turnover than small stores. Even though their net profit per sale may be small their return on capital investment may be fully as large if not larger.[9]

In the wholesale trades the principal figures available are as follows:

Sales		Cost of Doing Business
		Wholesale Hardware 1917[10]
Less than	$ 500,000	17.8
$ 500,000 to	1,000,000	19.2
More than	1,000,000	23.5
		Wholesale Clothing 1917[10]
$ 500,000 to	1,000,000	16.1
Less than	1,000,000	17.8
		Electrical Goods 1917[10]
More than	$ 500,000	17.0
$ 500,000 to	1,000,000	18.1
		Wholesale Groceries 1917[10]
Less than	$ 500,000	7.2
$ 500,000 to	1,000,000	9.0
More than	1,000,000	10.3
		Wholesale Grocers 1920[11] *and 1921*[12]
		1920
Less than	$ 500,000	9.5
$ 500,000 to	1,000,000	8.9
1,000,000 to	1,500,000	8.6
1,500,000 to	2,000,000	8.6
More than	2,000,000	9.3
		1921
Less than	$ 500,000	11.1
$ 500,000 to	1,000,000	11.4
1,000,000 to	1,500,000	11.8
1,500,000 to	2,000,000	11.8
More than	2,000,000	11.8
		Wholesale Shoes 1919[13]
		(Percentages based on cost of merchandise)
Less than	$ 100,000	16.4
$ 100,000 to	500,000	19.5
500,000 to	1,000,000	16.5
More than	1,000,000	13.2

[9]Professor Converse points out that the cost of operating a retail store increases with the size of the city in which the store is located. Since many of the largest stores are located in big cities, their higher operating expenses may therefore be due in part to their locations in such cities, rather than to the mere fact that they are large stores. This suggests that a complete study of this problem should include an examination of operating cost of different sized stores in cities of uniform size.

[10]A. W. Shaw figures taken from "How to Run a Wholesale Business at a Profit."

[11]Harvard Bulletin No. 26.

[12]Harvard Bulletin No. 30.

[13]Federal Trade Commission Report on Shoe and Leather Costs and Prices, p. 118.

It will be seen at once that the figures are scant and to a certain extent contradictory. They are also for years that were more or less abnormal. All of the A. W. Shaw figures, which are for the war year 1917, show larger expenses for larger houses. The Harvard figures for wholesale groceries show smaller costs for larger houses in 1920, except for the very largest houses, but progressively higher costs for larger houses in 1921. The Harvard Bureau explains that this may be due to the fact that smaller houses were able "to readjust their expenses somewhat more rapidly" to slumping business conditions than large ones with more elaborate organizations.

It is probably safe to draw certain conclusions from these figures, however. In the first place, there is no such marked tendency as there is among retail stores for expenses to decrease for medium-sized houses and then to increase for very large houses, although the Harvard figures for wholesale grocers show this tendency for 1920. It is also safe to conclude that the large houses have higher expenses than small houses, to a more marked degree than in the retail trade. The Federal Trade Commission's figures on shoes are the only exception, but the small number of establishments covered in this study, and the unusual method of expressing expenses as a percentage of merchandise cost, make one wary of these figures.

Why do large wholesale houses have higher operating costs than small houses? The answer appears to be similar to the answer given above with regard to retailers, but with a shifting of emphasis. More elaborate service and greater variety of goods probably account for it in part. Some of the larger wholesale grocers, for example, brand their goods, pack olives, mix flour, grind spices, and roast coffee, so that they have taken on manufacturing operations, which naturally increase their expenses.

But the more important reason is probably to be found in the extra effort that a large wholesale house must exert in order to increase volume. A wholesale house is different from a retail house, in that it gets its business largely by sending out traveling salesmen. The larger houses cover the wider territories. Sending salesmen to distant localities increases traveling expenses, requires careful packing, and means more expense for administration and supervision. At least, the itemized expenses for four trades, as published by the A. W. Shaw Company, bear out this statement.

The importance of greater administrative expenses for large wholesale houses is brought out by a leading authority on wholesaling, who says that when a wholesale house does a business of over a million or a million and a half, it can not be operated successfully under individual management, and that departmentization becomes necessary, and that this carries added expense all along the line, in order to main-

tain volume. He also says that when a jobbing house goes outside of territory directly tributary to its location, it does so at a sacrifice of profit, and at a greater selling cost. This explains why there are so few national distributors among wholesalers. Those that do distribute over an extensive area usually handle quality goods primarily, have their own brands, and to a large extent perform manufacturing functions.

An increase in expenses as the size of a jobbing business grows does not necessarily mean a smaller net profit. In addition to savings through lower purchase prices, there is the possibility of specializing on goods that carry wide margins. Another authority on wholesaling relates his experience. He managed a wholesale hardware house for ten years, and during that period the sales increased from $1,500,000 to $12,000,000. The cost of doing business increased, but the profits of the company also increased. This was accomplished by getting the salesmen to concentrate their efforts on sporting goods, fishing tackle, etc., which carried good margins, instead of on nails, wire, etc., which are staple goods with small margins. Salesmen were taught to carry and display samples, and specialty salesmen were also sent out, carrying trunks of samples. Compensation of salesmen depended on the profits made from their sales, and they were rewarded liberally for brilliant work. The system naturally resulted in greater expenses, because the character of the business was changed, but it also resulted in increased volume and in greater profits.

From the foregoing facts we may conclude that the principles of large-scale production do not apply so definitely to wholesaling as to retailing. An increase of volume means the covering of a wider area, and greater departmentization and supervision. It is undoubtedly true, however, that of two wholesale houses carrying the same variety of goods, covering the same territory with salesmen, and in every other respect giving the same quality of service, the larger house will have the lower operating cost. But probably even this is true only to a certain point, when intensive cultivation of a given sales territory may cause a rise in costs greater in proportion than the increase in sales. In other words, the law of diminishing returns becomes operative.

Having in mind the data on both wholesaling and retailing, it is probably safe to conclude at this point that although the principle of large-scale production applies to merchandising, it does not apply in the same degree as it does to most kinds of manufacturing. This is not hard to believe when we consider the principal economies that result from large-scale production in manufacturing. These are better and more extensive use of machinery, division of labor, better buying, and

utilization of by-products. A large mercantile house can economize through better buying, and to a certain extent through division of labor, but the use of automatic machinery is extremely limited, and there are no by-products to utilize. Marketing necessarily involves a large amount of personal service and personal contact that cannot be reduced to machine operations. The economies claimed for large-scale production, therefore, do not apply in full to the merchandising process.

A complete study of this problem would also cover the selling activities of manufacturers, but there are practically no data on this subject. It seems reasonable to suppose that when a manufacturer sells through his own regional sales houses, those having the larger volume of business would also have the lower unit selling costs. In fact, it is only when a manufacturer can sell a sufficient volume in any one part of the country that it becomes possible for him to establish a branch selling house. This general principle is borne out by figures taken from the books of Swift & Company showing the cost per hundred pounds for branch houses in different sized groups. The average for all houses considered is called 100, and the average for each group is expressed as an index number. There are ten branch houses in the group of each different size, selected at random, except that care has been taken to have them comparable in the matter of functions performed. The figures are as follows:

Average Pounds Per Week	Index Number of Expense
25,000-50,000	121
50,000-75,000	108
75,000-100,000	99
Over 100,000	94

These branch houses are engaged in wholesale selling, and the fact that costs decrease with volume bears out the conclusion expressed before, that when two wholesale houses cover the same territory and give similar service, the larger will have the smaller expense.

It is more or less obvious that the operating expenses of an individual store would increase and decrease from month to month according to volume of business done. To verify this fact, however, figures have been obtained from a well-known department store showing the cost of doing business for each month.

The monthly cost is expressed as an index number of the average cost for the whole year, which is called 100, and the percentage of total volume done each month is also shown. The figures are as follows:

Month	*Per Cent of Year's Sales*	*Index No.*
January	7.1	113.9
February	6.0	138.0
March	7.9	102.7
April	10.0	84.2
May	9.2	92.3
June	9.1	92.7
July	6.0	131.0
August	6.6	131.3
September	6.8	114.5
October	9.3	85.3
November	9.1	94.6
December	12.9	73.5

There are very few figures on costs of marketing farm products which show the relation between volume and expenses. Figures obtained from farmers' elevators in Minnesota before the war,[14] however, show that the cost of handling grain decreased from 2.5 cents per bushel for very small houses to only a little over a cent for the very large houses. The tendency toward decreasing costs was very marked. Very likely the same would be true of potato warehouses, tobacco warehouses, and the like. Also, it is generally assumed that commission firms in the grain and live-stock trades, which handle large volumes of consignments, have lower unit operating costs than small houses.

These scattered instances suggest two very important considerations that have a bearing on this general problem.

The first is that there is apparently a more pronounced diminution of costs for larger volume in marketing agencies which handle only one or a small number of commodities in bulk. This means a better utilization of the physical facilities and of the time of the personnel of the organization. A grain warehouse is akin to a manufacturing plant in these respects.

It also looks as though expenses decrease faster with volume for a marketing agency which does not have to send out salesmen to solicit trade. A country elevator, for example, merely ships grain in car lots to one or two commission men in distant markets. Practically no expense is involved in finding a buyer, and it makes little difference how far away the ultimate market may be. Compare this with a retail store which has to rely on customers coming to the store, or with a wholesale house which has to pay the expenses of salesmen to go out and drum up trade. Grain and live-stock commission houses also have this advantage in that their goods are sold in a restricted and organized market place by relatively few salesmen.

[14] Weld, *The Marketing of Farm Products*, p. 33.

Conclusions

Although this does not pretend to be a complete study of the problem, owing principally to lack of adequate data, it may be safe to hazard the following conclusions:

1. The principle of decreasing costs does apply to merchandising, but not to the same extent as to most kinds of manufacturing.
2. In the retail and wholesale trades, points are soon reached both in the intensive cultivation of territory already covered and in the extensive cultivation of additional territory, where costs begin to rise.
3. The advantages of large-scale merchandising are greater than figures on operating costs seem to indicate, because these figures do not measure the better purchasing power of large companies, nor the greater profit on capital that may result from more rapid stock-turn.
4. The higher operating costs of large stores are due in great part to more elaborate service performed; but this more elaborate service in many cases may be a necessary accompaniment of size.
5. The available data seem to indicate that the principle of decreasing costs does not apply as much to wholesaling as to retailing.
6. The principle of decreasing costs applies to different marketing agencies in varying degree, depending on number of commodities handled; whether they are handled in bulk; whether volume can be increased substantially without increasing plant or personnel; whether salesmen have to be used; and whether salesmen can sell on the premises (as in a retail store) or whether they have to travel in search of buyers (as in a wholesale house).

THE PROPER SPHERE OF GOVERNMENTAL REGULATION IN CONNECTION WITH THE MARKETING OF FARM PRODUCTS

By E. G. Nourse
Iowa State College

I. The Basis of the Problem.

We live today under the benign auspices of an Administration whose slogan is "less government in business." Unfortunately, the precise meaning of that phrase is even less clear now than it was two years ago, before that Administration had committed itself to the Packer and Stockyards Control Act, the Grain Exchange Act, and several special government credit enterprises; before it had used its influence without stint, though thus far without success, in behalf of a shipping subsidy and had fostered a whole brood of virtual subsidies under the broad wings of the present tariff law. The Norris Bill, now pending, will if enacted exceed all previous conceptions of the proper field of government participation directly in business activities. It is by no means certain that it will pass, and even less probable that the Administration will enter any very strident claims of paternity if it does. But, whatever its fate, it may be taken as the clearest expression of the politico-economic philosophy of that wing of our citizenship which believes that it is a function of government to guarantee economic prosperity to her citizens and to enter the field of active business as the means of bringing it about.

At the opposite pole stand the disciples of that school of political science which declares "that government best which governs least." Speaking as we are only for the economic side of the problem, it would seem axiomatic that that government is best which with the least cumbersome, least costly, least meddlesome, and lightest running machinery succeeds in performing efficiently for its people those societal functions which they can perform only imperfectly or not at all for themselves, and yet leaves them the largest practicable freedom to carry on their private business ventures. The school of *laissez faire* expounds an economic argument in favor of non-interference, an argument which is still sound if the proper field of its application be intelligently drawn. Government is not to be commended for the paucity nor blamed for the multiplicity of its participations in our affairs, business or other. Each such activity, however, needs to justify itself upon the grounds of serviceability and upon its being a natural outgrowth from the needs of our developing economic structure.

The case for or against a particular line of government regulation

in the process by which farm products are marketed is to be made only in the light of a careful analysis of the economic institutions of the market as a whole. The regulatory offices of the government may be resorted to for any one or all of five general purposes which may be listed schematically as follows:

1. Regulating the mechanism of exchange—money, and in time credit institutions.
2. Standardizing weights and measures, and in time qualitative standards applying to goods rather than to the exchange medium.
3. Determining desirable trade practices; methods of trading, settlement, and delivery; standards of fairness, safety, and facility; limitations upon time and place of trading and upon trading personnel.
4. Prescription of commissions, service charges, or traders' margins. Securing uniformity and reasonableness; preventing extortion, discrimination, and evasion.
5. The fixing of prices for private trade whether otherwise regulated or unregulated.

A sixth step in this ascending (or is it decending?) series would be actual merchandising by government agency, as in the Norris bill already referred to. The present paper, however, discusses merely the regulating and not the superseding of private trade.

II. The Established Zone of Government Control

These several phases of regulation will be discussed under three divisions which I have called "the established zone of government control," "the promising field of present experimentation," and "the dubious area beyond." There is no intention to suggest that the whole matter is closed so far as these first zones are concerned. There is an intensive as well as an extensive margin of cultivation in this field. It is quite possible that profitable returns may be secured by further development in the fields in which some cultivation was long ago begun not less than by pioneering in fields of regulation previously uncultivated. It is distinctly worth while, however, to view all new proposals in relation to what has already been firmly established and generally accepted and not, as one would be led to suppose by the protests of certain affected parties, as something wholly novel and unsupported by the pragmatic tests of earlier social experience.

We may pass over the first two of these five groups rather hastily. Civilized countries long ago ceased to question the need of some intervention of organized society if a swift and flexible system of exchange was to be built up. When we wanted to outgrow barter we

had to let government regulate coinage. The inadequacy of the private gold- and silversmiths soon became apparent and government control inevitable. The demand for a yet more swift and flexible exchange system brought us from a money to a credit economy and fostered the development of commercial banking. Every growth in the complexity of banking institutions has called for more government regulation. A certain sizable fraction of our people are writhing today under the wounds which they believe themselves to have suffered from the first great movement of the federal reserve system to regulate the swings of the business cycle. Whatever the imperfections of that action taken under the difficult circumstances which surrounded its first experimental use, it may be confidently predicted that we shall never abandon the degree of regulation now attained, but will work as rapidly as may be toward perfecting it as something in the nature of a governor upon our financial engine.

Under our second heading much the same general development may be observed. Standards of weights and measures must be recognized if trade is to develop. Traders' custom gives way to legal enactment. The significant point is that definition is not enough. It is much to know what "pound" and "bushel" and "gallon" are, but the trade may still be much confused and retarded by the use of "wine quart," berry boxes and 15/16ths-of-a-bushel hampers. We need go no farther than the mathematician to get our concept of the dozen, but quite possibly the arbitrament of law must be invoked to prescribe that eggs be sold by the pound to the end that quantity-price ratios shall be made clear. Standard container laws operate positively to reduce both waste and disruptive trickery, but both the inertia of producer, trader, and buyer, and also the vested interest of the package manufacturer in finished or half-finished stock, patterns, and machinery preclude the abolishing from within of uneconomic styles of packages, no matter how multifarious their number or how mischievous the reasons for their introduction.

As to qualitative grades, they have been the children of trade necessity. The case for them has already been too ably made for me to need to pause to discuss it here. The shortcomings have been with the manner of their application rather than with the principle of establishing them. From millers' grades of wheat, through exchange regulation, state inspection, and now federal supervision there was no logical halfway house at which to stop without prejudicing the speed, certainty, and equity of trade relationships. It is possible that too great zeal may lead to the attempt to carry the movement into fields where the perishability of the product or the high degree of individuality of its separate units may make the effort at standardization impracticable. Experience and good sense must draw the line,

but a national and even international trade in our great staples is to be made orderly, efficient, and economical only when one official definition of quality applies to such a product throughout its market movement.

III. The Promising Field of Present Experimentation

Our second zone of possible government regulation carries us out of a realm in which a large amount of successful experience has made the principle of government supervision not only familiar but even acceptable, to one which is highly controversial. Shall government attempt to standardize trade practice? In approaching this question, it is well to remember how it was the day-to-day needs of traders which gave us our law merchant and laid the foundation for our commercial codes of today, whose ordering no one expects to find anywhere but in the hands of our government in its legislative and judicial branches. But, whereas certain of the more rudimentary relationships of bailment, negotiable instruments, and the like are thus satisfactorily disposed of, the growing complexities of modern commerce in farm products have created situations with which the ordinary court is by no means competent to deal. Traders themselves have had so forced upon them the necessities for further regulation of trade practices that they have set up organized exchanges, trade associations, and like bodies for controlling the conduct of their members or relations with other interests in the esoteric fields not covered by our state and federal codes. The real question is: Will such agencies of trade government, sprung spontaneously from the exigencies of a particular and highly complicated business, be incorporated in some solid and satisfactory way into the general machinery of government; or shall such an organized trade remain an *imperium in imperio*, holding its special procedures immune from government interferences and resorting to the courts only for the adjudication of quarrels which refuse to be settled within the guild and which seem to come under the rubrics of existing statutes? Those who object to any further intrusion of government regulation over farm marketing agencies often reiterate that there is plenty of law now on the books for the protection of all parties. But whoever will follow such litigation will probably be convinced that after an elaborate effort by counsel to instruct (or to confuse) judge and jury concerning the technical considerations involved, the ultimate findings seldom go understandingly and fairly to the heart of the issue.

The logical answer in this situation is that we cannot expect legislative bodies, being what they are, to draft positive enactments for the regulation of these complex commercial activities. We must place

a large reliance upon self-governing bodies intimately informed concerning the needs of their business and of the actual effect of any given rule. This must be supplemented, however, by the advisory and supervisory action of executive bodies, commissions or otherwise, competent to bring the claims of other interests in our society to bear upon the operations of such trade bodies and capable also of bridging the gap between such self-governing bodies and the law-making and law-enforcing arms of the government. Such is the nature of the Capper-Tincher Act to regulate the grain exchanges. It does not put definite proscriptions upon specific trading practices in vogue in the exchanges. Even the short step taken in this direction in the bill as first enacted was retraced, and the act now sets up an agency of supervision based upon an adequate investigational procedure and not upon the prejudgment of a legislative body.

The rejoinder which those who oppose government regulation make to such a proposal is that it costs money to set up an agency to learn about their business; they themselves understand it and it is quite all right. If the man intrusted with the task of investigation is intelligent and fair-minded, he will exculpate the exchange in the end, so why waste public money and harm the business man? If the investigator is not in the end convinced of the beneficence of existing arrangements, he is a fool or a knave and his regulatory actions or recommendations are fraught with grave danger. This complacency as to the correctness and sufficiency of their own rule and their supercilious rejection of the notion that anyone else can achieve a safe or constructive understanding of their business seems not to be entirely justified by an analysis of the situation.

It must be admitted that the efforts of the trade as embodied in the action of their organized exchanges often seem to be directed toward following, trading upon, or even engendering false notions in the minds of their clients which are responsible for waste or inefficiency in marketing methods. For example, every live-stock commission company is breaking its neck to convince shippers of its ability to get the best "fill" on stock and no live-stock exchange has dared to lift its voice against this ancient abuse. Likewise, at least one great exchange puts near the head of its list of achievements its victory over the packers who tried to inaugurate a practice of buying animals subject to post-morten inspection. Even admitting their claim (which may or may not have merit) that in so doing they have protected the grower against an insidious attempt to break down the strictly cash-payment character of the live-stock market, it is by no means clear that their action has not had a harmful effect in checking the reflection of actual qualitative differences into market price, averaging good and bad under one blanket quotation which penalizes

the seller of clean stock and brings to the grower of diseased animals no admonitory evidence of the relative uselessness of his product.

The trouble in all this is that the traders must take a short-run and mercenary view of the market, and that the bodies that the traders set up to govern themselves enact rules in accordance with the views of a numerical majority. It is imperative that their membership be broad. While rules may be so drawn or so administered as effectively to shut out the intrusive farmer and his marketing company, it has not appeared practicable to draw them so rigorously as to exclude a majority whose ideals of fair or desirable or permissible trading practices is considerably lower than would be that of the more high-minded, better educated, or broader visioned elite. The typical American business man is not prone to parade his virtues and hates to seem to take a holier-than-thou attitude toward trade associates. He is likely, therefore, to abstain from practices which, though permitted by his trade organization, run counter to his ideals, rather than to go tilting against the windmills of majority sentiment.

But while such men scattered all through the trade may hesitate to embark on bootless quests alone or as numerically weak minorities, they can be counted upon to fight ably in such a general crusade as may be launched to effect the permanent betterment of the given trade organization. It is in just such leadership that government regulatory activity finds its place of service. A public agency and it alone is capable of assuming a supervisory function over all the forces of self-regulation which have for some time been emerging from within but whose fullest achievement has been checked by the inherent difficulties noted above. Regulation from within has the fundamental weakness that the only interest represented is the one whose own bread and butter is involved. Not merely can they hardly be expected to be as zealous as might some outside party in the abolishing of a practice which holds the possibilities of profit making, but also they are so inured to established practices by long familiarity, so accustomed to view them in a certain perspective, that their judgment is likely to be less sound than that of the intelligent outsider, who brings a fresh point of view to their consideration and who looks at them from the several angles of all the parties at interest.

It may be noticed that I have said the "intelligent" outsider. It has already been observed that the prevailing opinion in trade circles seems to be that no outsider can be intelligent concerning processes so highly technical as marketing farm products through central markets. Against clumsy meddling by enthusiastic "reformers" no protest can be too strong. But I would venture to suggest that the great bulk of traders are themselves innocent of much fundamental knowledge of the economic forces working through the phenomena of

a market process in whose technical details they may be letter perfect. People who live in glass houses must not throw stones. Probably it would not be hard to convince this gathering that the economist chosen to act in a regulatory capacity in connection with the marketing of farm products is more likely to master the intricacies of actual trade processes than the trader who objects to any regulation is to ground himself in economic fundamentals. The delicacy, complexity, and great public importance of the modern business of food purveyance demand that its economic problems shall have the most intensive study and wisest guidance possible by the best fitted of professional economists working in the public service. In this connection it may be observed that the very completion of the process of trade organization and voluntary self-regulation, which has solved their internal problems in so large a degree, has itself tended to accentuate or even create problems of external relationship and their regulation.

In the live-stock trade, for example, no single self-regulatory body can be expected to cover the case. The Union Stockyards Company may regulate its own business; the packers theirs; and the live-stock exchange, the traders' exchange, and the order buyers' association theirs, either severally or with greater or less solidarity of interest among commission men and traders as a class. But it is not conceivable that there can be evolved from within any form of self-regulating organization which shall reconcile the conflicting interests of producer, public utility, dealer, manufacturer, and consumer. It is noteworthy that the commission men who fought the Packers and Stockyards Law to the last ditch almost immediately appealed to it for protection against the country-buying packer, and look to it further to check the reprehensible practices of the coöperative selling company.

IV. The Dubious Area Beyond

In passing from a discussion of the regulation of trade practices to a consideration of the regulation of charges and of prices, we confront a very different order of considerations. I have called it the "dubious" area in distinction to the "promising" area in which public regulation seems destined to play a helpful and creditable part. The general argument is that regulation to enforce open, fair, and nondiscriminating methods of trade makes for speed, accuracy, economy, and free competition in a line of business for which these desiderata are peculiarly pressing.

Whatever the reasons (and some of them are weighty) which have cried for government intervention in the matter of charges and prices, the feeling of the economist runs constitutionally against such in-

trusions into the determination of market values, which seems to be fundamentally a natural rather than a mechanical process. We shrink from taking any measures calculated to reduce the flexibility of a system whose health depends upon its ability to adjust itself rapidly and fully to every changing stress or strain thrown upon it by the swift sucession of outside events. For myself I would about as soon lash down the steering wheel of my car and ride on the back seat as to regulate or "fix" the prices of farm products. Practically the same though in less degree may be said of limitations upon the number of middlemen who may intervene in the market career of the product or the setting of the margin at which each trader must transact his business. Happily the end of the war period brought an end of fixed margins, the prohibition of re-sales within the trade, and like restrictions. I believe that even the brief war experience demonstrated that, in the very case of the more perishable products which such regulations were supposed chiefly to benefit, the sacrifice of flexibility or ease of adjustment in the marketing process was a loss which far outweighed any supposed gain. In the long run it is doubtful if regulation directed primarily to the end of seeing that nobody makes any money will commend itself to economists any more than it does to business men.

The phase of the question of marketing charges which is of immediate practical concern relates, of course, to brokers' commissions, stockyards charges, and the like. Here again the exchange or other trade organization has itself moved a considerable distance in the direction of self-regulation. It has secured internal adjustment by the method of uniform commission rules and non-discriminating service charges. This has measurably protected the public at the same time that it has relieved the trade from cut-throat competition.

But, as mentioned above, the achievement of complete adjustment within may be but the beginning of new turmoil from without. One of the chief desires of the farmers who have clamored for grain and live-stock market regulating agencies has been to set up some tribunal to pass upon the reasonableness of charges as such and to fix their level, not merely to see that rules of uniformity were enforced. To the present speaker it appears that there is a clear line of division within this problem. The first concerns agencies with which the factor of competition is restricted or absent. Our experience with rate control even in those fields where it has seemed necessary—the railroads and public utilities—has been fraught with such difficulties, not to say disasters, that we may well hesitate to take on any other large orders in any field where it can be avoided. In the case of the stockyards company it would not appear that it can be avoided, owing to the inevitable necessity of monopoly in this business if an efficient market

center is to be maintained. You cannot look to several competing stockyards companies to regulate the level of service charges. Indeed, if one may appeal to the closely analagous case of produce auctions, it would seem that conditions then would be worse rather than better than they are in the monopolized public stockyards company. As to the latter, hasty rule-of-thumb or rule-of-mob rate slashing by government regulating bodies might be expected to produce sad results, which in the end would react upon the farmer not less than the other classes to be served.

Obviously the ascertainment of any tenable basis for such rates involves a careful study of the whole question of the capitalization, management, and returns of stockyards companies and opens economic questions of the most controversial sort. Theoretically, I should like to see the matter attacked as an investigational and advisory matter only. Practically, the regulating body must be given a star and a weapon. Otherwise, good advice is likely to fall on deaf ears and to evoke merely an impudent rejoinder. But the representative of the law, vested with authority and armed with weapons for its enforcement, should be wise, temperate, and fair-minded, as well as strong. Else he may be a mischief-maker instead of a promoter of peace and economic betterment.

The second part of our divided issue of rate regulation touches traders' charges. If regulation has accomplished what is, I believe, its chief purpose, namely, the establishment of open competitive trading under fair trade practices as already discussed in this paper, the level of charges can safely be left to itself. The one point in this general statement which should be singled out for clarification concerns the position of the producers' selling company. The situation differs as between the live-stock markets, where the trading place is owned by a stockyards company distinct from the live-stock exchange, and the grain market, in which the exchange owns or controls the physical body of the market. Stockyards companies admit coöperative or "outlaw" companies freely and, protected as the latter are now under the Packers and Stockyards Control Act against the boycott of trade organizations, they should be left to take care of themselves and set up such competition as they can in the matter of rates and service. This is the true doctrine of *laissez faire*.

In the grain exchange the situation is more complex. It is not possible on this program to debate the nice question whether a patronage dividend is a rebated commission. The Capper-Tincher Act essays to make the exchange *as it is* swallow the coöperative *as it is*—at best a dubious use of the regulatory principle. Quite as intricate and more pressing is the problem of requiring the exchange to admit a producer company which meets the letter of their membership rules

but is asserted to evade their spirit. A third possibility is the use of government authority to compel the divorcement of the exchange as a trading body from the organization owning and governing the trading facilities of the market. This would appear to be a clearly wholesome and safe use of the powers of government regulation and avoids the objections which both economist and business man may direct against the present plan of endeavor. It would be logically similar to but financially much easier than the measure requiring the packers to divest themselves of stockyards holdings. Furthermore, the packers both as purchasers of stock and as stockyard owners have given producer companies fair treatment according to the latter's own testimony, whereas the boycott by grain exchanges has in several cases (though not all) been open and flagrant.

V. The Prerequisite to Effective Regulation

The issue to my mind is not one between regulated or non-regulated marketing. It is between competent, scientific, trustworthy regulation and amateur, doctrinaire, political "lame-duck" regulation.

It is a wise saying that "you can't unscramble eggs." Governmental regulation has evolved as one of the inescapable elements in our highly complicated market organization. Trade bodies developed internal regulation for the protection of their own members. These have demonstrated their inability to protect adequately the other parties to the process, and hence the demand for public supervision has become too insistent to be denied. Hasty or overzealous use of these newly-conferred powers would be very costly and probably induce a reaction in which the whole machine would be consigned to the dump.

It is not possible to decide by *a priori* reasoning just where the frontier of public participation can most wisely be drawn. Much more work of observation, experiment, and appraisal is yet to be done. But with regulatory work placed in the hands of a trained personnel, some of them drawn from the finer elements of the trade but with a liberal sprinkling of those who have had professional training in economics, it seems safe to expect that moves will be tentative till a sufficient basis of fact can be secured on which to base trustworthy judgment. There is a big work here for the economist both in government service and outside. Let us hope that the profession may justify itself by the thoroughness of its scientific method, the open-mindedness of its attitude, and the practical sense of all its activities. Persons brought under the sway of live-stock and grain regulation, at first aghast at what *might* happen, are now breathing much easier at the prospects of what evidently *will* happen. With the present Secre-

tary of Agriculture and Chief of the Bureau ofAgricultural Economics these experiments are inaugurated under the most happy auspices. Even if the present high-water mark of practical sense, broad sympathy, and professional competence should not be maintained in all future administrations, it does not seem likely that conditions would ever get any worse under present regulatory laws than under the predatory regime of no regulation. We frequently hear bitter criticism of elected magistrates or appointed judges, but they are few indeed who argue for the abolishment of our courts.

PROBLEMS OF MARKETING—DISCUSSION

JAMES R. HOWARD.—The desire to control or dominate situations or businesses with which we may be connected is a very well established human instinct. In no stronger way has this instinct found expression than along commercial lines. It is developing along channels reaching from the production of the basic product until the finished product reaches the consumer.

The Ford Motor Company own their own coal mines and steel mills, as well as their manufacturing plants. They have recently purchased a railroad in order to further facilitate the movement of their products. They follow their manufactured product through branch establishments until the jitney is placed in the hands of the ultimate consumer.

Big rubber industries are buying or planting their own rubber tree plantations in the tropics in order that their manufacturing may be promoted by the control of the sources of their basic supplies. Great sugar companies own and operate millions of acres of beet or cane lands. Tobacco companies are buying tobacco plantations both within this country and abroad. All have the one desire and purpose of controlling their basic products and establishing commercial or industrial independence.

Industry has always been able, in a great measure, to fix its own price upon its own product. The American woolen mills practically control the woolen markets of the country, through the exercise of their control over the greater part of the woolen output. Their independence is shown in their trade practice of only occasionally opening their books for bids upon their products. The bids are not bids in price but rather acceptance of quantities of product at a price set by the woolen company itself. The buyer can accept the price or let it alone. The company merely manufactures the volume of goods for which acceptances have been made and the public pays the bill. While the woolen company does not control all of the woolen business of the country, it does control a sufficient volume so that the price which it sets largely determines the price at which the small or independent mill operates. It would be idle to say that the law of supply and demand of basic products, of labor, and, indeed, of finished products, are not factors in the establishment of industrial prices. Nevertheless, industry to a large extent is able to establish its own charges and control the volume of its output.

The instincts and desires of the farmer are not unlike those of our brothers and cousins in industry. We have the same desire to follow our product as far as possible down the distribution channel as has any other industry. We have the same desire to establish prices as has a manufacturer. Moreover, we have the same moral right and ought to be conceded the same legal right as any other class of citizenry.

Many farmers in the past have been advocates of price fixing. A great proportion of the public have viewed with alarm the possibility of a farmer control or monopoly of price, and the fear of accomplishing such a thing has gone so far as to attempt the prevention of any legislation or any system of organization which might make such a venture possible. The attitude of the public has been that a farmer monopoly would so raise

prices as to become unduly oppressive to the consumer. These same people have little comment or complaint to make under the present conditions when we find the farmers' prices about at, and in some cases below, pre-war levels, while consumers' costs have doubled and trebled. The recent price trends certainly indicate that the price of the basic product is but a small factor in the determination of the price of the finished article.

There are two mediums other than those of present trade practices by which the prices of farm products might be fixed or a monopoly created.

The first would be by means of government regulation or price determination. We had a taste of this during the war and the farmers complained of it bitterly. It did not operate to our satisfaction. However, since the continuance of the agricultural depression which began nearly three years ago there is springing up a demand in many parts of our nation and, indeed, in other countries as well, for a government price fixing or price control of agricultural products.

This is no new plan or theory. Its patent rights expired by the statute of limitation centuries ago. It was brought out in one form or another by the ancient Egyptians, Hebrews, Greeks, and Romans. In modern times there have been numerous similar attempts in almost every nation. In no instance has it been a success. In most cases a bad condition was made worse. In every attempt the impotency of statutory regularities to supersede economic laws is abundantly proven. Those who now advocate governmental price control as a permanent cure would do well to consider that the problem is not to attempt to revamp the immutable by making over economic principles to fit transitory conditions but rather to so order things that every-day functioning of all individuals and classes of individuals may proceed equitably, naturally, and unhampered by artificial barriers. A governmental price fixing would mean a definite and arbitrary commodity price.

The one thing which the farmer needs at this time is price. He not only needs it but he must have it if he is ever to get back to normal conditions. I do not refer to price in terms of dollars and cents. A five dollar a bushel arbitrary price on wheat would be a calamity unless all other values were fixed on definite relationship basis, and I do not know to whom we would all be willing to trust to fix all prices of all commodities. No wise man would attempt it. By price, I mean real price, or that which the bushel of wheat or the hundred pounds of pork will buy in other goods or service. It matters little to me whether my corn is 50 cents or $1 or $2 a bushel if taxes, rents, labor, transportation, and other commodities are not fixed accordingly. It matters most materially, however, whether corn is 50 cents and everything else is on a dollar or two-dollar basis. Governmental price fixing of farm prices on any commodity or all commodities would certainly fall of its own weight and precipitate a general calamity.

The second method of price control lies in the development of marketing associations. Why has not the farmer the same right to control his marketing channels as has the possessor of the goods which the farmer grows? Why has he not the same right to fix the value on the product of his sweat and toil as has any other class of our citizenry? There can be but one

answer to either question regarding the farmer's right or privilege. Concerning his ability to interpret his rights into constructive action or realization, is another question. However, those who look askance at the possibility of such future development may do well not to underestimate the recent advance in the coöperative marketing of farm products both in this country and abroad.

Coöperation is no new thing. So near as I am able to determine, the first attempt in the United States was in the establishment of a coöperative dairy at Goshen, Connecticut, in 1810. In the decade from 1840 to 1850 there were a number of attempts at coöperative organizations both in this country and in Europe. The decade from 1870 to 1880 witnessed a very remarkable development amongst farm organizations and included not only marketing organizations but credit organizations and mutual insurance companies. Of course, many of these were failures with numerous contributing causes for their not being successful. Many of them fulfilled a useful function and passed out of existence with the changing of population or shifting of agricultural developments. A few have continued successfully over a large number of years. At the present time there are 928 coöperative cheese factories in the United States located in 21 different states. There are 1610 coöperative creameries located in 38 different states. There are approximately 6000 coöperative elevators, the oldest one having been in continuous operation since 1868. There are more live-stock shipping associations than elevators, the oldest of which according to our record having been established in 1883. These, however, are, in the main, local organizations. They effect some economies in the intermediary marketing of the product but have no effect upon the ultimate price because of lack of cohesion. They are, however, potentially great factors in that they may become the nuclei of larger endeavors.

The fear of such a possibility is clearly indicated in the frantic efforts of boards of trade to prevent the U. S. Grain Growers from obtaining membership on the exchanges or from functioning in any way. The same attitude has been shown regarding the establishment of Producers' Commission houses upon the various live-stock markets. Already there are operating under the National Live Stock Producers Association coöperative sales agencies at East St. Louis, Ill., Indianapolis, Ind., Chicago, Ill., Peoria, Ill., Buffalo, N. Y., Ft. Worth, Tex., and one at South St. Paul, Minn., and are handling at some of the markets from one-third to one-half of the total receipts. At practically every market where established these commission firms are leading in volume of business handled and are steadily increasing in patronage.

These firms have not attempted to have any control of prices other than that of stabilizing of receipts, and through that stabilizing of receipts the general steadying of the market. What control they may later exercise over prices remains to be determined.

The situation, however, with the California fruit coöperatives is quite different. They have a limited productive area which facilitates their organization and operation. They have a perishable product which the farmer must market in season and thus makes it easier for him to submerge

his desire for personal initiative in marketing. They have signed up under a long-term contract for a large percentage of their various products. They approximate a monopoly control of their products and hence are in an enviable position to determine prices. Do they in fact do it?

An examination of the operation of these organizations clearly indicates that they do determine the price for the immediate crop or season. There are factors, however, which enter into their determination which are entirely beyond their control. These factors are principally those of supply and demand, and in the long swing they become in reality the determining factor. Perhaps it would be more accurate to say that the coöperative organizations set the price in accordance with determining economic factors. They have most surely succeeded in accomplishing an orderly marketing of their products which has stabilized prices to the producer. They cannot prevent the planting of more orchards or vineyards, neither can they materially influence the purchasing power of the consuming public. For that reason the prices to the growers have not been maintained at war-time levels. They have, however, through proper stabilization been held at higher levels and hence brought more profitable incomes to the grower than have unorganized lines of agricultural production. They have also made a distinct contribution to society in that they have prevented their members from becoming bankrupt. They have maintained orchards and vineyards whereas had it not been for the coöperative organization many would have been abandoned and later on, no doubt, the consuming public would have suffered because of a shortage of these commodities. Thus, while they have stabilized prices, they have insured the consumer of future supplies of their products.

The movement in a number of southern states along coöperative marketing lines seems to many more problematical. The underlying principles are not different, but the territory is very much more extensive and the products themselves are less perishable. It is easier to hold a thousand growers in organized effort than one hundred thousand. It is easier to hold the man who knows his product must go to market at a definite time than to maintain the interest of the grower who can put his product in the warehouses or granary and bide his long term of marketing. Moreover, the commodities are capable of a very much broader production than those which have been so successfully marketed through coöperation on the Pacific coast. Tobacco, for instance, is grown successfully from Wisconsin to Louisiana and from New Hampshire to Georgia. If the tobacco marketing organization should so control the price to the grower as to bring an unusual profit, it would be reasonable to expect that the industry would expand either by large numbers of non-member farmers engaging in tobacco cultivation or from the tobacco manufacturers themselves increasing their own planting. In any event, it would appear to be easy to create a supply far in excess of the demand. The men in charge of the tobacco marketing work realize this. They are aware that the fixing of any abnormal price would, of its own weight, disrupt their organization. Knowing this, and knowing the necessity of a thorough merchandising of their product, they are employing marketing specialists to take charge of their sales service. They are making coöperation real business. Hence, it is not probable that dire distress will

follow. What pertains to tobacco will pertain to cotton and all other commodities.

Another point is worth careful consideration. It is not reasonable to suppose that anything like a majority of the farmers will ever become members of any marketing association. The farmer is too independent minded as yet to expect such results. Therefore, there will be a competition in marketing efficiency between the coöperative organization and the product which is sold through non-coöperative channels. This competition of systems added to that of prices or individual will be keener than the old competition. This is already showing up in the live-stock commission companies to which I have already referred. Every shipper of stock to markets where coöperatives have been established for any length of time concedes that service began to improve the moment the coöperative commission firm began to get on its feet. It is not the old competition of one firm as opposed to the other but it is the competition of one marketing principle as opposed to another marketing principle and is, therefore, much more effective. This competition of marketing in itself would prevent any possibility of an excessive or undue fixing of prices.

Coöperation is making even greater progress in European countries than in America. Students of the European situation concede that coöperative organizations are the principal stabilizing force in many of those nations in their times of social and political uncertainties. The American Farm Bureau Federation has recently had an observer in ten different European nations studying coöperative marketing, and his report indicates material progress in nine of the ten countries.

The experience of the wine growers of Spain nicely illustrates my summary and conclusion. For a half century they marketed their products coöperatively and were prosperous. They conducted their marketing organization in such manner that the public welfare received its due and proper consideration. Finally there came a time when the management through selfishness forgot the public welfare, and the wine growers organization immediately went to the wall. It was fitting that it should do so. The success of any organization which attempts to fix or control prices will only succeed as it takes into account the interest of the whole people. This is the fundamental prerequisite of success. Any other plan or system is surely destined to fail.

Charles J. Brand.—The discussion of marketing problems, particularly with respect to the products of agriculture, has developed very diverse and, in some respects, very extreme points of view. Some of the commentators appear to take the position that there is nothing the government can do that will be really helpful. They flatly take the position that wherever the government takes a hand it harms rather than helps, and that "It is none of the government's business." If you were to make a careful personnel survey of the "less government in business" group that has grown so numerous and expressive since the War, I feel quite sure that it would be found that a majority of its individual components operate under the

principle of getting the largest possible profit the law, public forbearance, or the conscience of the operator will permit.

I agree with Professor Nourse that the government should not, itself, engage directly in the marketing of products except under very special circumstances, when for causes that may sometimes exist private enterprise is not able to function with reasonable profit to itself and with justice and fairness to those whom it should serve and not exploit. Such an instance occurred during and immediately after the War in connection with the purchase, sale, and distribution to farmers of nitrate of soda for fertilizer. We distributed over 200,000 tons (roughly $20,000,000 worth) at an estimated average saving to the buyers of about $20 per ton, and made a profit of over $60,000 despite elaborate efforts to make none. By reason of the demand for nitrate for the armed forces, farmers would have had little or none except for the functioning of the government.

I have no patience with too often selfish and unthinking critics of the government's efforts to serve the best interests of the people. Certainly, whatever affects the ethical, moral, social, and economic well-being of its citizens affords proper material for the attention of the government, and whatever may be uneconomical, unsocial, or subversive of a higher standard of public morals may be tabooed by the government through legislative enactment, administrative acts, or otherwise.

In the United States, any discussion of the general topic of the proper sphere of government activity in connection with the marketing of farm, factory, mine and forest products, must view the matter from at least three different angles:

1. The proper sphere of local governments, such as cities, towns, and minor political units;
2. The sphere of the several states, to which important powers were reserved by the Constitution; and
3. The sphere of the national government.

I

Municipal governments, particularly in the case of those controlling the public acts of citizens concentrated in large metropolitan populations, have important functions to discharge in connection with the marketing of farm products. They relate themselves chiefly to the conduct of public and private markets of all kinds which fall under police regulations; the protection of consumers locally from fraudulent practices; the enforcement of sanitary rules in structures and on streets and in spaces used for marketing purposes; the provision, either directly, or indirectly by franchise granting, of intra-city transportation and terminal facilities; and, in general, the doing of those things that are necessary for the health, economic and social well-being of people collected in cities. Obviously there is no call for local political units to do things that private enterprise does, or can do well by reason of the operation of ordinary commercial incentives. Generally speaking, even the most complaining critics of government "interference" with business are perfectly willing that those tasks, in which there is no hope of profit, that must be done for citizens, shall be left to the government.

II

The sphere of the several states of the Union is naturally broader than that of the municipality and necessarily involves certain coördinating functions between city and country, between industry and agriculture, and, in general, the treatment of problems on a broader basis due to wide diversity of interests of its population. State-wide legislation is effective in many respects and is indispensable in some. Under our dual form of government, certain powers can be exercised only by the states. It seems trite to say that business does not operate along political boundary lines, so that the possibility of forty-eight kinds of legislation on a specific subject furnishes a natural impediment to the efficient conduct of the many kinds of business, particularly where commerce between the states is concerned.

III

The proper sphere of the national government, in relation to marketing, may be briefly stated under the following descriptions: (1) the development of educational policies with respect to marketing problems that will make for industrial peace, political amity, and national preparedness in satisfying the proper yearning of the people for a decent fullness of life; (2) the laying down of suitable rules of action to prevent unfair or destructive methods of competition and monopolization where there is not under existing law a sufficient degree of supervision to insure the protection of the general public, the general prevention of fraud and advance of uneconomic practices; (3) the investigation of conditions in all industries and business, with sufficient incisiveness so that the government, as the representative of all the people, will be enabled at all times to know whether the business of production, conversion, and disposal of the necessities of life is being run efficiently and economically, and whether profits are reasonable and competition is operating in such a manner as to give fair treatment to both producer and consumer; (4) A highly proper and necessary field of operation for the national government is in the fixing of grades and standards for both products and containers, and the enforcement of their use; (5) The central government furnishes almost the only relatively disinterested agency to promote uniformity of legislation, which is so necessary in order that business may proceed in an orderly and certain way; (6) It is the only agency capable of and in most respects fitted for the collection and dissemination of accurate, timely, and disinterested information regarding market prices, movements, methods, practices, organization, and conditions. Finally, in general, it may be stated that wherever the commercial motive is not sufficient to bring about the wise solution of marketing problems with reasonable promptness, and where intelligent self-interest does not stimulate just and fair dealing between the various factors in the chain of distribution, the government, which is after all merely the people acting collectively, as a disinterested but none-the-less vitally affected factor, may properly step in to regulate affairs in such a manner as would appear best to serve the interest of all the people. Government participation, or as some prefer to call it interference, should, in my

opinion, in no case be resorted to until it is clear that an institution, trade, or industry is unable from within to bring about conditions that will remove criticism, distrust, suspicion, or even fear from the public's mind.

Say what we may about the sufficiency of economic motives or self-interest to correct the faults in our marketing structure, the stress on the part of non-producing distributors, not only of raw materials but of manufactured goods, is to get the largest possible toll the law and the conscience of the enterpriser will permit. This is not unnatural, nor is it necessarily wrong, neither does it in a majority of cases work out to the disadvantage of the people, but it does necessitate functioning on the part of government in such manner as will insure the development of industries along lines that are safe morally, ethically, socially, and economically.

That the development of legislation on the part of the national government has, in general, conformed to the principles laid down by Professor Nourse, and possibly somewhat amplified above, is, I think, obvious from the character of the legislation at Washington during the past twenty years. The following very incomplete list of federal laws is brought to your mind:

The Food and Drug Act of 1906;
The Meat Inspection Law of 1907;
The 28 Hours Law of 1906, relating to the shipment of live stock;
The Standard Apple Grade and Barrel Law;
The Standard Container Act;
The Seed Importation Act;
The Cotton Futures Act;
The Grain Standards Act;
The United States Warehouse Act;
The Food Products Inspection Law; and more recently
The Packers and Stockyards Act.

The foregoing list is not given with any idea of completeness. Other laws of greater comprehensiveness, such as the Federal Anti-Trust Law, the Federal Reserve Act, and the Tariff Commission Law, have been passed with a view to serving the best interests of the people. Some may argue that the intentions have been of the best in the matter of legislation, but that the results have been destructive. The consideration of even a single one of those many pieces of legislation, such for instance as the Meat Inspection Act, will demonstrate the public benefits of government "interference" in marketing problems. That law did more to help our foreign and domestic commerce in live stock, meats, and meat products than any one thing that has occurred. The opposition of affected industries is also well illustrated by this case. Now the packing industry itself would probably violently oppose any move that would deprive it of the little purple "U. S. Inspected and Passed" stamp. In present day retrospect the days of Upton Sinclair and *The Jungle* with its glaring overstatements have faded far into the background.

I predict that the more recently enacted Packers and Stockyards Act, administered, as it is being, constructively, fairly, and helpfully to all citizens, will, given the full and willing coöperation of the industry that

has been promised and is expected, be a great bulwark of protection to an enormous and absolutely essential business.

In closing I might summarize by saying that there is general agreement that only in the rarest cases should the government actually engage in the business of marketing any products whatsoever; that its functions are general and relate to the discovery of sound principles, the general education of the public as to political and economic questions involving the development of sound national conditions which cannot exist where there is constant friction due to social injustice, the establishment of uniformity in legislative standards for products and practices, the collection and dissemination of reliable information, and the creation of conditions that will assure as far as such a thing is possible the free and proper interplay of economic forces and the operation of the "square deal." Government can not guarantee economic prosperity, but it should assure economic fair play. The citizen should be left to do his work as untrammeled as is possible with the ever increasingly complex structure of exchange that modern conditions have called into being.

W. D. Moriarty.—In discussing the proper sphere of government regulation in the marketing of farm products, I wish to confine my remarks to emphasizing the fact that one of the phases of marketing farm products in most serious need of government regulation is the marketing of farm products by coöperatives. In stressing this fact, I do not have in mind either the protection of the public from unfair price fixing or the protection of other marketing agencies from unfair competition. In some few cases it is true the coöperatives can and do victimize the consumer by monopoly methods; but, as a rule, the very nature of the price-fixing process is beyond *serious* manipulation by coöperatives, and the tendency to let the farmer do anything he wants to is apt for some time to continue even to the point of excepting coöperatives from the operation of laws designed to regulate other marketing agencies; and in local cases, such as milk, where price fixing is too flagrant, public opinion will find a remedy.

The regulation I have especially in mind is regulation to protect the coöperators themselves from their own stupidity and inefficiency and from the beasts of prey who organize coöperatives to exploit them for private gain. Some of us may hold that the chief function of coöperatives is to displace or in part supplant other marketing agencies, some of us may hold that their chief function is to act on the one hand as a warning to those agencies, and on the other to serve as evidence to the farmer that other marketing agencies have no such margin of profit as the more wild-eyed of the apostles of coöperatives have asserted. But whether the chief function of coöperatives is to regulate other agencies, or in some measure to supplant them, entirely too many farmers' coöperatives are notoriously inefficient.

Regulation by education is not enough, but much could be done by it. If the farmers who are considering forming a coöperative had been even moderately educated in advance as to why coöperatives fail, the most stupid errors, at least, would be avoided. If in addition, they had furnished

them an authoritative statement of normal margins of total expense and normal margins of profits in the field in which they are considering supplanting normal marketing agencies, they would not form coöperatives in hopes of securing benefits wholly beyond the possibilities of realizing.

Even without government education, much would have been accomplished if the newspapers could be induced to give real publicity to the scandals of failures of coöperatives, showing by what stupidity and by what incompetence specific coöperatives have failed—and even by what mendacity they were motivated into organizing. But the public wants to hear of successful coöperatives, and the newspapers furnish the news that the public wants. If we had really wanted to hear of the incompetence and greed which led to the failure of the Plymouth Cheese Coöperative—really as truly a scandal as the Stillman divorce, and with sob stuff from which a good writer could have wrung a column a day for two weeks—the newspapers would have given in full space. But the public just now wants to hear uncomplimentary things about normal marketing agencies and things complimentary about coöperatives. Then, too, a small army of national, state, and county employees are trying to make coöperatives more successful, and both they and the coöperatives themselves naturally give publicity to coöperatives before they fail, not after. In fact, for here surely we must be frank, the story of success is turned loose at the earliest possible moment and not only often but as a rule before there is any assurance of continued success.

Education alone will not suffice. Two types of regulation by government seem necessary if coöperatives are to be efficient—either as in part supplanting other marketing agencies, or as affording them sufficient stimulus to make them serve the farmers more efficiently. The first of these is a reasonably efficient application of the principle of the Blue Sky Law. Whether the organizer of the coöperative is a farmer himself or an outside beast of prey who organize the coöperative to exploit it for private gain, he has no more right to victimize the farmers under the banner of coöperation than the organizer of any other corporation has to victimize its stockholders.

In the second place, after the coöperative is formed there must be a regulating agency to protect it from gross stupidity and inefficiency and greed. Every coöperative must be forced to accumulate a reasonable reserve, must be forced to render not only honest but dependably true statements to its members, and must be forced to conduct its business in a reasonably efficient manner.

Both of these types of regulation assume a paternalistic attitude, and so both may, in some sections, be resented; but in proportion as the service is honest and intelligent, and especially as it is kept free from red tape, it will in the end win over most of its opponents. The other alternative, to let the coöperatives go unregulated except as they can be regulated by persuasion and education on the one hand and failure on the other, seems too costly—too costly to the farmers themselves and too costly to the other marketing agencies which pay a needlessly heavy penalty when coöperatives are organ-

ized under wild expectations and fail either from dishonesty in management or from gross inefficiency.

FRED. E. CLARK.—It is the purpose of this discussion merely to emphasize some things which Dr. Weld has discussed, and to point out certain angles of interpretation of the data which he has used.

The first point concerns the difficulty of making statistical comparisons between large and small stores.

As Dr. Weld has suggested, it is a question how far the figures he has used can be made to support a thesis concerning large-scale operations in merchandising. This is because in many cases large and small units of stores of certain types are not really comparable. Large stores, for example, not only do a larger business than do small stores handling the same general type of merchandise, but they draw business from a much wider area. They have, moreover a different clientele—a clientele which expects excellent service and a wide variety of merchandise from a large store. Even the commodities handled are not entirely comparable. Large grocery stores often deal in higher priced specialities than do their smaller competitors, and they may even ignore almost entirely the staple business of the ordinary grocery store. Again, it was shown in the paper under discussion that, in the shoe business, for example, corresponding to the varying volumes of business, there is usually a difference in the grade of the shoes handled.

The problem of obtaining a correct statistical analysis of the economy of larger-scale merchandising is particularly apparent in the case of large wholesale houses. Large wholesalers not only sell over a wider area than do smaller houses but they brand and sometimes manufacture many of their own products, so that in some cases they have, in addition to a manufacturer's problems of production, a manufacturer's problem in *selling* his product—for a large wholesaler must create the entire demand for his own brands, usually by sending salesmen to the retailers. The small jobber, on the other hand, commonly takes orders for staple goods, and for specialities and branded staples for which the manufacturer has already created a demand through his consumer advertising or through "missionary" salesmen sent to the retailer. Since no such demand has been created for the goods on which the large wholesaler places his own brand, his marketing problem corresponds, in a sense, to the combined sales problems of the manufacturer and jobber of many of those products which are handled by the small jobber. An analysis of the selling costs of large jobbers as compared with small jobbers seems to show that the former have larger costs. *But,* when this difference in their market problem is considered, the case is not clear, since the corresponding sales work of the manufacturer is partly assumed by the large jobbers when they brand *their own* merchandise.[1]

[1]This is, of course, not conclusive so far as the other reason for large expenses given by Dr. Weld is concerned, viz., difficulties in administration may also be present.

Dr. Weld states that "of two stores in similar locations, carrying the same variety of stock, giving the same quality of service and delivering over the same area, the store having the larger volume of business will have the lower operating cost." This seems to be a correct conclusion. Nevertheless, we have not, so far as we know, any figures which cover such cases. As has just been indicated, the large and small stores and the large and small wholesale houses do not compare with each other on all of these points. The nearest comparisons of this nature seem to be the comparisons of the branch houses of Swift and Company, and of department store operations by months, which Dr. Weld gives in his paper.[2]

Among other things, Dr. Weld concludes that the most economical size of the individual plant is sooner reached in merchandising than in manufacturing.[3] All of the available facts seem to point to this conclusion. It is, in fact, borne out indirectly by his statement that grain elevators and potato warehouses have routine operations, in which economies in operation appear as the volume of business increases.

This particular illustration brings us to a recognition of the importance of the functional approach to an analysis of the problem. The business of the average merchandising house is of a twofold nature. It involves the work of exchange, including the functions of buying and selling and certain aspects of standardization, and it involves the operations connected with the physical supply of the commodity, including transportation and storage. The operations of physical supply are largely routine and often mechanical in their nature. Consequently, they are closely comparable to the manufacturing operations in the performance of which the greatest economies of large-scale operation have been realized. Thus in the case of the grain elevator and potato warehouse previously mentioned, little sales effort is needed to bring trade to the house. The exchange rests on a price basis, and hence little selling is possible. The several operations are routine and mechanical in their nature, and, consequently, the economies from large scale operation show particularly in their cost figures. In the great retail stores and in the large wholesale houses, on the other hand, the great need is to *sell*, in order to get volume. This increases the cost of selling to such an extent that (1) it is likely to offset any economies in the routine and mechanical operations of the unit, and (2) it may even offset the buying advantages which are possessed by large organizations.

The reading of Dr. Weld's paper and the study of such additional material as I have been able to find lead me to emphasize the following general points concerning the advantages and disadvantages of large scale operations as they apply to merchandising:

[2]But the latter illustration tends to confuse the issue, since it concerns varying volumes within a single store organization, which has many fixed expenses. It cannot be used to illustrate a tendency as between *different* stores of varying size.

[3]We are prone to speak thus, as though there were in each industry some one most economical unit. But it is particularly true of merchandising that the ability of individual enterpreneurs varies so greatly that whereas the average size of greatest efficiency may be found, many larger stores will be operated as economically, and, of course, some of this average size will not be effectively operated. The more one observes business, the more he comes to realize the large degree to which general conclusions may be vitiated because of differences in administrative abilities.

1. The large merchandising organization seems clearly to have certain buying advantages. In the first place there is the advantage of specialization. The volume in which the business is done makes it possible to hire or to develop and use to advantage the services of skilled buyers. In the second place, the large house has a certain power in purchasing which arises from the volume which it buys. Because it buys in large quantities it is commonly able to force supply houses to grant lower prices or better terms than those commonly received by smaller competitors. It is likewise able to demand better service from sellers—quick deliveries, for example.

2. There are, on the other hand, certain difficulties of supervision which arise from the mere size of the business. These first two points have been adequately covered in Dr. Weld's paper.

3. The third important point refers to the disadvantages which a large merchandising organization suffers because of the difficulties it has in getting a sufficient volume of sales, and in keeping the trade it has. The large store, the large wholesale house, and the large factory, must each draw on a large clientele in order to get volume. And it is in this connection that I wish particularly to discuss the superior service which large merchandising organizations sometimes render. Perhaps Dr. Weld overemphasizes service as a *difference* between large and small units—a difference making them incomparable. It seems, however, that we should also consider the extent to which this service is a *necessity* due to the size of the merchandising unit, and consequently a *weakness* of the large establishment. Service, as Dr. Weld shows, is really a part of the sales effort which is made in order to get volume. This will be seen by an examination of the figures he quotes from the expense data in the retail clothing trade, as gathered by the Northwestern University Bureau of Business Research. Of those expenses which increase with the size of the business, practically all may be considered as charges which increase because of the necessity for using extra sales effort or extra service to get volume. Among these items are charged sales, volume of outstanding accounts, and the value of goods returned to the store. All of these are service elements, the extent of which probably can be explained by the need to sell. That is, the large store must be generous in such matters in order to get volume. Such general expense items as delivery, wrappings and containers, allowances, and elevator expense may likewise be excessive because of the need for service as a means for obtaining volume. Advertising is obviously a sales expense, as is the higher grade personnel which the large stores seem uniformly to have.

In summary, I wish to emphasize five general conclusions concerning the problems stated:

1. The large merchandising establishment has certain buying advantages, due to its ability to hire specialized and skilled buyers, and to its buying power, which enables it to require lower prices and superior service from supply houses.

2. When a large part of the operations are mechanical and routine in their nature—as in the case of storage and elevation—the large house may

gain the economics, from the division of labor and the use of machinery, which are so important in the economy of large-scale manufacture.

3. To the extent that large merchandising establishments must make special efforts to sell their services in order to get volume, they are likely to have higher unit costs for selling than do their smaller competitors. The "excessive service" of the large sales organizations must be considered a weakness due to this necessity of getting volume through rendering superior service.

4. Problems of supervision become greater as the establishment increases in size, but these problems become peculiarly difficult when selling is a major activity. This is because, briefly, the human element is more important to selling than to production, and its operations and interactions are not easily routinized. The ordinary methods of controlling routine matters are, consequently, ineffective, or at best, their use becomes more expensive.

5. The balance which determines the relative economy of operation of large and small merchandising would, thus, seem to turn largely on the extent to which the economies found in operating the routine and mechanical functions of the business, and in purchasing on a large scale, are offset by the increased costs for selling and service, and for the administration thereof, which arise from the need to obtain a large volume of sales.

ROUND TABLE CONFERENCE ON AIMS AND METHODS OF BUREAUS OF BUSINESS RESEARCH

Aims and Methods of the Bureau of Business Research, Northwestern University

Horace Secrist

The results which it is hoped to secure through the creation of a university bureau of business research may be indicated by setting out its advantages to business, to the faculty, to the students, and to the school itself.

When a school is unorganized for research purposes, the services which it may render to business consist primarily in the advice which is given by those members of the instructional staff who are fortunate enough to command the respect of business houses and associations and whose opinions are sought. The result of this, as a rule, redounds to the benefit of both business and the teachers involved, but it does not necessarily mobilize the good will of the school nor integrate the research activities of the faculty and the students. When a school is organized for research through the establishment of a bureau, the following, among other advantages, are likely to accrue:

1. Advantages to business:
   The school thus organized may be used by business—
   a) As an alternative to private agencies for research purposes.
   b) As an alternative to the creation by itself of a research agency or department.
   c) As an organized body to which appeals can be made for statements of business facts and principles more inclusive and comprehensive than could reasonably be expected from an individual instructor or department.
   d) As a dispassionate and scientific source for information which is controversial or which might be colored by private or public agencies.
   e) As the source most likely to be formulating a business synthesis because of its intimate contact with professionally trained men in all phases of business relations.
   f) As a confidential agent to which trade or business secrets would be divulged when they would not be given to an individual or to a commercial agency. An organized bureau, like a school, is looked upon as being impersonal, the interests of which are non-pecuniary and scientific. University resources give organized research a standing and a permanency which cannot be expected from widely dispersed or scattered individual efforts.
2. Advantages to the faculty:
   a) On many problems involving more than a single interest, organized research makes possible a coördination of research activities.
   b) It stimulates production in so far as researches are coördinated, since organization of the field and the delivery of a product demand it.

c) It is educative both as to problems and methods of research when conferences are had and responsibility and obligation are distributed.

d) It tends to eliminate lost motion and duplication of effort to the degree that coördination is effected.

e) It results in the accumulation of a mass of information, the common property of all, superior to much of that in current books and texts.

f) The good will of an organization in the eyes of business furnishes an opportunity to instructors themselves not only to secure facts, but also to establish personal business contacts.

g) Connection with a research department, in case the teaching schedule is lightened, overcomes in part, at least, the necessity for periodical withdrawals from teaching in order to secure business experience.

h) It makes possible the development of a technique of method and a coördination of subject-matter to be taught and studied.

3. Advantages to students:

a) An organized research department furnishes the sanction whereby students in field work are given experience in meeting business men; in securing facts; in observing the conditions under which business facts are recorded and the types of information upon which executive and other action rests; in witnessing business operations; in observing practical applications of business technique supporting generalizations developed in textbook and lectures. Students are given training in doing and are held to a definite accomplishment as a part of an organized scheme of study.

b) Similarly, an organized department of research throws students of dissimilar interest together, each contributing his part to an organized whole. Both the unity and at the same time the peculiarities of business may be illustrated in a piece of research work of which the student is a part.

c) An organization for research creates group interests and arouses a stimulating rivalry. Moreover, it has the effect of pooling the interest of both students and instructor in a common enterprise.

4. Advantages to schools of business, per se:

Distinct gains to schools of business may reasonably be expected from organized research activities. Publicity of the proper sort is an asset, and organized research will be much more likely to command favorable attention than will that which does not result in a periodic, sustained, and comprehensive product. The good will and coöperation of business are desired, and there is nothing in this connection which will bring them as soon as proof that business schools not only know how to *teach* business subjects, but also to be of service in the *solution* of business problems. A school seeks business men for instruction; a bureau seeks business problems for study and solution.

At Northwestern it was felt that there was an opportunity to integrate the research activities of the instructional staff and student body; to collect

and analyze business facts in such a manner that they would serve as a basis for instruction and at the same time contribute to a knowledge of business and of economic science. The aim has been not to duplicate the work of private research organizations which analyze the problems of individual enterprises and associations and render to them confidential reports. On the other hand, The Bureau is interested in determining the principles underlying business, in stating them as economic truths and making them available as guides not only for the business which are studied, but also for others who are interested. Accordingly, it has insisted that the widest publicity shall be given to its findings, while at the same time it has been careful to hold as confidential the individual facts which have been furnished to it for analysis.

The Bureau has not been content to make superficial analyses nor to render a "service" for a *quid pro quo*. Neither has it been its main purpose to popularize its findings, and to instruct business organizations and others in the manner in which its conclusions may be used as a basis for money making or as a guaranty against business losses. Interest has been in the discovery rather than in the application of economic principles. It has, of course, recognized that upon some one must rest the responsibility of converting business units to the necessity of applying the facts discovered. This function, however, has not been assumed. It can best be performed in schools by making its findings the basis of instruction in courses dealing with marketing and retail distribution, and by trade associations and publications as the background for a campaign of education. What is now needed most is the discovery of principles resting upon a factual basis, which will serve as a foundation upon which business may be built and conducted.

As a basis for its studies, the Bureau first set up in concrete form the standards to which business research must conform. In doing this, an inventory was taken of the methods which must characterize research if it is to be of fundamental value. These standards have to do in turn with defining the purpose of its respective studies; with correlating the methods used and the purposes in mind; and with drawing conclusions from the data. It is, of course, unnecessary before this body to describe in detail what the standards are, further than to say that truth is the end sought and every legitimate method is used which will determine it. Largely because of the type of problems which have come to it for analysis, the Bureau has restricted its study to the field of retail distribution. What it has attempted to secure from analyses in this field are the underlying expense- and trade-tendencies which characterize it. Its interest has been to determine the uniformities and basic principles which have general application, and to measure the tendencies under which competing units operate, not so much in point of time, as in terms of varying location and conditions of operation. That is, it has attempted to develop a measure or barometer for retail trade in which the characteristics of business, in so far as expenses and costs are concerned, are looked at from a "vertical" as distinct from a "horizontal" viewpoint. By the "horizontal" aspect is meant the perspective incident to time whether related to sequences of processes or to

reactions of business to different phases of the business cycle. By the "vertical" viewpoint is meant the perspective incident to variations at a given time where stores are operating under different conditions or in different locations. That is, the Bureau has been seeking for trade- and expense-tendencies and the uniformities respecting them by reviewing an industry in cross-section.

The uncertainties of business are of two major types: first, those which relate to the future, and, second, those which have to do with the results of competition in the present. It is the latter to which chief consideration has been given. Through the analysis of mass information, it has discovered what it conceives to be underlying and persistent tendencies of expense distribution which repeat themselves with striking uniformity for stores at different times and places and under different conditions of operation. Competing units stand on different economic levels respecting expenses and profits and the conditions incident thereto, and it is possible to measure with some accuracy the relative advantages or disadvantages which characterize them, and the probable adjustments which are necessary in passing from level to level. That is, out of a study of mass information, basic or "master facts" emerge. It is these which the Bureau has been chiefly engaged in discovering and organizing in the form of principles and tendencies.

A recent writer has said that, in a half-century of experience of a society of chartered accountants, not a single fundamental economic principle has been determined. His explanation of this astounding fact is that attention has been too much focused upon individual business operations and experiences and not enough upon the underlying principles of which these are but tangible expressions. And yet, he adds, it is only in the hands of accountants that the necessary information for determining such truths falls, and it is only by the use of statistical methods that they may be determined.

Is there not a challenge in this statement not only for accountants, but also for economists and schools of business which points both to the methods which research must follow, and to an obligation extending alike to those who possess the necessary facts and to those who are in a position to analyze them? The facts out of which a science of business may be constructed are available; what is necessary now is the application to them of the scientific method. This provides a point of view and a technique. The former is characterized by a demand for the truth; the latter, by intelligent observation, scientific measurement, impartial analysis, logical inference, and a sincere application of the conclusions reached to the problems to which the facts and observations apply.

The New York University Bureau of Business Research and its Work

Lewis H. Haney

The work of the New York University Bureau of Business Research, under the guidance of chance and the predilections of its director, has developed in three directions. In the first place, the bulk of the Bureau's

work has lain in the field of marketing. Investigations have been made in advertising, methods of paying salesmen, and the use of exclusive agencies. In seeking to make more money, business men desire to learn more definitely where their market lies and how to reach it more directly. In helping them here, the Bureau may not only serve them, but also serve society. Our largest jobs are a general analysis of the New York market which we are making for the Association of Advertising Managers of twelve large New York newspapers, and a comprehensive study of buyers' attitude towards department stores and their advertising which we are making for one of New York's largest department stores. We are now engaged in an independent study of advertising mortality.

We have found interest among merchants more than among manufacturers or financial institutions, and in New York, at least, it is in mercantile business that the University Bureau seems to have the greatest opportunity.

Our second chief field of activity lies in the construction of trade barometers. Each month we send to the members of the New York Wholesale Grocers Association a special trade barometer which applies to their particular trade and to their particular section of the country. This contains a weighted index number of wholesale grocery prices, an index number of consumer purchasing power, and curves showing the course of average daily sales, physical volume, and collections. I will say, in passing, that we have found that the purchasing power curve of New York State has value in forecasting the course of grocery sales. In the periodical, *Administration*, we publish a general barometer called "The Trend of Business" which we fondly believe to be the most reliable forecaster of the business trend now in captivity. At present we are working on a purchasing-power index of which I have high hopes. I will merely say that our work in these fields is not built upon a mathematical or empirical basis, but is based on a study of cause and effect relationships.

Our third field of endeavor has been in the direction of moulding public opinion, and I would invite your attention to the possibilities of this field. We have sent out two questionnaires to the members of the American Economic Association; one dealing with the American Valuation Plan, the other with the New York Curb Market. Our idea has been that by publishing the results of such questionnaires and securing adequate publicity therefor, we can make the judgment of economists more effective in public affairs. I realize that this is a delicate matter but firmly believe that it is a legitimate and valuable function.

Perhaps it is here that I should mention our study of Textile Trade Terms, prepared for the Associated Advertising Clubs. On the basis of questionnaires from 1000 women scattered from Maine to Oregon we have determined what textile terms are, and what are not, misleading. This study will be influential in inducing correct usage in the trade.

The methods which we use in the Bureau may be of interest to you. In the first place I will say that our chief working force consists of a little group of graduate students supported by what we call "Working Fellowships." These "Working Fellows" we regard as apprentices in the field of

business research and they give practically their entire time to the Bureau. For this work they may receive at the Director's discretion credit for two graduate courses. In this way, for a small expense, we secure the loyal assistance of well trained, competent men. To be sure, there are some disadvantages, as we have to adjust the work of the Bureau somewhat to the interests of the Fellows in order to insure that each has a major piece of work which he can utilize, if he so desires, towards a thesis.

Other graduate students also coöperate. For example, I conduct a seminar in Methods of Business Research in which each man has an appropriate problem. We have also had a few graduate students who desired to do work under the direction of the Bureau for the purpose of acquiring experience or of working out a thesis. A few Federal Board students have also assisted us and these I understand, may receive credit for business experience for this work.

For the rest, we have one permanent assistant, a secretary-stenographer, and a combination stenographer and clerk. We also from time to time employ students for field research in New York and vicinity.

The relation of the New York University Bureau of Business Research to New York University is one of the points I desire to stress. What I have said about graduate work is an important part of that relation, and I believe that the function of the Bureau as a part of the graduate work will grow.

The Bureau should also play an important part in connection with the faculty and instruction. Our Bureau is in touch with the faculty in two ways. We have a faculty committee on the Bureau of Business Research, to which I frequently turn for advice, and which upon occasion may serve as an interpreter, a buffer, or a general point of contact between the activities of the Bureau and the faculty. We also have a group of consulting experts from the faculty, who have agreed to coöperate with the Bureau whenever any research in their special fields is called for. This group embraces the professors of Marketing and Advertising, Sales Management, Industrial Engineering, Foreign Trade, Accounting, Statistics, and Finance. I must admit that there has been small occasion as yet for calling upon most of these coöperators, but I am looking forward hopefully toward an expansion of our work which will make the arrangement mutually beneficial.

A University Bureau of Business Research can do a great deal in the way of securing data which will be useful to instructors. Our exclusive agency investigation, the results of which will be published in the near future, was suggested by one of our professors who felt the need of more comprehensive and exact information in connection with one of his courses. One of our instructors in statistics has called upon us for a problem for use in his classes. From time to time the various members of the faculty have dropped in to inquire for information on various subjects.

The members of the faculty should coöperate in the work of the Bureau and have done so in our case, both in the way of giving advice concerning investigations and by putting their classes at our disposal for making advertising tests. In this connection I may say that a university affords a great laboratory for studying the reactions which may be of value to business men.

A Bureau of Business Research can serve as a clearing house for outside faculty activities. In New York University most of the faculty members do outside work for various industrial and commercial concerns. The Bureau of Business Research may serve as a middleman in marketing the services of competent faculty members who may be called in as experts to deal with the subject in which they are qualified.

As already intimated, the Bureau needs advice in many different lines—sales, merchandising, advertising, industrial relations, plant management, engineering, applied psychology, finance, statistics. In my opinion the Director of a University Bureau should endeavor to interest the experts in these different fields which he has on hand on the faculty to which he belongs, and should try to secure work for them. I will add that they should generally be compensated for their work on a fair per-diem basis.

In general, the University Bureau of Business Research should be regarded as the University's business laboratory. It should be equipped by the University with the necessary implements and machines, including a special library and mechanical appliances, and through it the University should put at the disposal of the business world those research activities which it is qualified to conduct, in much the same way as its various biological, chemical, and physical laboratories are utilized. There should be an especially close relationship between the department of statistics and the Bureau.

Another phase of the activities of a Bureau of Business Research which may be touched upon lightly—even delicately— is its function as an agency of good university publicity. The published researches of the Bureau are the best sort of advertising for a university. Sound and helpful business forecasts may be very effective in bringing the University into helpful contact with business men. I look for great expansion in the recognition given to university work in economics and statistics as a result of such contacts. The slogan of the University Bureau should be "Extending the Service of the University."

Let me close with a word of warning. There are dangers in the contacts to which I have referred. The University Bureau must remain a true part of the University and to that end must retain its scientific integrity. It must not lose the social point of view. I have elsewhere stressed the difference between accounting and economics, which serves to illustrate my point. There is a wide difference between business and economics—between the private individual point of view and the social point of view. This difference we are apt to forget in business research. The University Bureau in doing practical work needs to remember the fact that long-run policies must be guided by social considerations. It must try to appreciate the business man's interests and do the things which will be of practical benefit to him, but in dropping academic aloofness it must be careful to retain scientific ideals and always seek not only the truth, but the whole truth and nothing but the truth.

Two problems should be mentioned. First, should we accept work which can not be published? It is a safe rule not to do so, but one which in my judgment may be departed from. At New York University we have

made a number of scientific studies in *safe* fields which may never see the public light. A clothing manufacturer wants us to determine the relative attention value of certain illustrations used in his advertisements. A department store wants to know what factors determine women's shopping preference. These studies, to be valuable to them, must be given to them alone. In such cases I can see no objection. But I would refuse any propaganda work.

I submit that there is no ethical virtue in mere publication. Indeed the departure from virtue might lie in publishing only a part of the truth. I suspect that in not a few cases reports have been published by Bureaus which do not tell the whole truth nor cover all the data secured.

Second, at New York we do work for business men on a business basis. That is, we demand and receive compensation. There is much to be said for this. If a study has practical value, business men will pay for it. If it has not, it might be better to devote the Bureau's energies to something that has. One great problem of the University Bureau is to find what business really needs and then get results in a form that business men will really use.

The Bureau of Business Research of the University of Illinois

A. C. Littleton

I shall consider very briefly the aims of business research from the point of view of state universities and draw my illustrations from the experience of the Bureau at the University of Illinois.

When the establishment of a Bureau of Business Research was under discussion at Illinois not long ago, it quickly became apparent that a state university had certain responsibilities in this connection to the state as such, which need not be felt by other research organizations. These responsibilities are expressed in the following section of a report upon the proposal to establish the Bureau.

> It is possible to lay down certain broad principles and policies for the Bureau at Illinois, having in mind meanwhile the peculiar obligations attaching to a state university, and the clear desire to attempt only what others have not done.
>
> At least three principles seem to lie at the base of our proposed research.
>
> 1. It is part of the function of the Bureau of Business Research of a state university to study and explain general economic conditions within the state.
> 2. The best principles of good business management should be brought before the business men of the state.
> 3. The factors underlying the successful conduct of business should be constantly under examination, and the general point of view should be that of the average business man in a typical business in an ordinary community.
>
> It is doubtful whether any task undertaken by the Bureau would be justified unless it came within the scope of one of these principles. It will probably be wise to submit each suggested problem to this test.

Let me take up each of these points in turn.

The university as a state institution owes a measure of service to its own state which is not to be expected from endowed schools or other research organizations. While it does not restrict its student body or restrict its

research in any field to purely state questions, yet there is no doubt but that it owes its first duty to the citizens and to the problems of the state which created and maintains it. Consequently, it devolves upon its Bureau of Business Research "to study and explain general economic conditions within the state," yet with a consciousness all the while that many phases of economic conditions recognize no state boundaries.

Two activities of the Bureau will illustrate the application of this first principle. Three bulletins have been issued dealing with taxes. Included in these are some consideration of the sources of state income, non-tax as well as the general property tax, and a study of the characteristic tax rates for all cities of the state with 2500 or more population. Another project well under way is one which will undertake to outline the data that ought to be collected by civic bodies wishing to make a commercial and industrial survey of their communities. It is clear that such surveys will be valuable reports of economic conditions, especially when they are available in comparative form period by period.

The second principle adopted had to do with bringing the best practices of good business management to the attention of the business men of the state. The agricultural interests have their farm bureaus to bring to them the newest and best of scientific agriculture; the business interests have nothing to correspond to these. They very reasonably wish to have some such service and it seems but logical for the Bureau to be the agency—for the present at least. To quote again from the previously mentioned report: "This would not mean engaging in extension classes, correspondence work, and the like, but the production of bulletins from time to time which would be less in the nature of reports of research and more in the form of outlines of good practices which the average business man could adapt to his own enterprise." In regard to the policy of looking at problems from the point of view of the average business man, it is felt that "big business," having its own experts, expects to look after itself, and that it is the average business concern which, being of necessity without its individual experts, has the most right to look for suggestions from a public institution like a state university. We have been, perhaps, too inclined in many ways to overlook the potentialities and needs of the smaller towns.

In harmony with this policy the Bureau has planned a series of informational bulletins upon various aspects of business. The one at present nearest completion touches upon the personnel problems of the smaller concern, and it is hoped that it may be the means of directing the proprietor's attention to those personnel activities which will not be out of place in his business even if it be only moderate in size. Another project in this same class is an attempt to take the point of view of the ambitious retail shoe salesman and to answer for him this question: What can I do to learn more about shoes and shoe problems? We find a clear-cut need for better knowledge of merchandise as such, and we hope to be able to point out in some such way as this the path to that better knowledge, while at the same time not engaging in treatise writing. After shoes, other lines will no doubt follow.

In these first two phases of research attention has been directed primarily to the obligations we conceive involved in being a state institution. The broader aspects of business in general are covered in the third principle above mentioned. The factors underlying the successful conduct of all business are not to be overlooked.

This portion of our plan is not yet as fully matured as the others, but its broad outlines are formed. Without intending to minimize the value to business of accounting, finance, salesmanship, personal character, knowledge of merchandise and human nature, etc., it is felt that one of the most important factors in sagacious business management is *foresight*. The study of the means of developing foresight is to be the basis of a part of the Bureau's work.

Foresight in business involves several factors, one of the most important of which is a knowledge of general business conditions and the position at the moment in the current business cycle. I doubt, however, if we shall do much in this field; it is being well cared for already. But the other important factor, the relation of individual business enterprise to general conditions, will undoubtedly receive our attention.

It seems to us that not only is a knowledge of general business conditions becoming necessary to wise management, but a knowledge as well of the degree of relationship existing between the separate industry, or even the individual enterprise, and the cycle. It is our plan, as far as we are able, to work with this problem. Economic activity finds expression only through the policies and acts of individuals and it seems important to us, therefore, that individuals should not only be made aware of general tendencies of business as a whole but that they should also be given suggestions of how best to observe their own tendencies in relation to the course of business as a whole.

We realize that we are setting ourselves a large problem, and we realize also that we cannot find the answers alone or cover the whole field. But we are convinced that there is some degree of harmony between individual enterprise and the general course of affairs—there must be since a picture of general conditions is but a composite photograph of the condition of innumerable distinct enterprises. And we believe that, granted the opportunity and the necessary coöperation, by business itself, we may be able to learn—and to teach—something further about the inter-relation of the cycle and the individual.

Your chairman asks that specific reference be made to a possible practice of submitting private reports. In reply to this I may say that the Bureau at Illinois does not now nor will it in the future engage in work which should be undertaken by the private consultant for a fee. To do otherwise, I am afraid, endangers both our own feeling of independence of thought and action and the business man's confidence in the impartial and confidential nature of our work with facts supplied largely by him.

For much of our research work we must all rely upon the willing coöperation of individual business men, especially in supplying us with data regarding their own enterprises. Since we cannot have controlled laboratory experiments such as research in pure science enjoys, we can only study

the experience which those actively engaged in business have accumulated in their records. In a certain sense, then, their enterprises must be our laboratories—not in the sense that we would attempt in any way to "experiment" with them, but rather, if we may change the metaphor, that they should be regarded as mines possessing rich deposits of facts which, like the ores of the deepest gold mines, are to be accumulated, assayed, tested, and studied.

The study of business can only proceed upon a fact basis. The universities are perhaps the most disinterested parties to whom the facts could be given for study. They are taking up the burden of research in business in a spirit of service to all and special favors to none. And they will do all they can to maintain that disinterestedness and that spirit of service. At the University of Illinois we believe private reports by a public institution to be contrary to these ideals.

The Harvard Bureau of Business Research

Mary E. Osgood, Secretary

The Harvard Bureau of Business Research was organized eleven years ago as an agency for collecting first-hand information from business men to aid in instruction in the Graduate School of Business Administration. The field of marketing was chosen because at that time little reliable data had been assembled from the business men's point of view or for educational purposes regarding the distribution of various commodities. The first work undertaken was an intensive study of the retail shoe trade. Since then the research has been extended to the retail grocery, hardware, drug, and jewelry trades, to department stores, and to the wholesale grocery business.

The object of the Bureau's work is to find out just what the facts are in actual business as the basis for the formulation of sound theories regarding business practice. Naturally, therefore, attention was turned first toward operating expenses. Every investigation by the Bureau has shown that merchants in discussing operating expenses among themselves continually had many misunderstandings because they were not talking the same language; they did not mean the same thing by the same terms. For example, one merchant told an agent of the Bureau that his operating expense was 7 per cent. Upon being questioned, he said, "Oh, that's my pay roll." Selling expense seldom included the same items for any two retailers. One proprietor included in his expense a salary for himself; many did not. Again, one merchant who owned the building in which his store was located charged his business with a reasonable rental for the space occupied; another merchant similarly situated entered no item for rent among his expenses. And so the discrepancies continued to be revealed in every trade, making the preparation of a uniform classification of operating accounts necessarily the first step in any research on operating expenses. The classification designates the different items that go to make up the real cost of doing business and provides a standard profit and loss statement upon which comparable figures can be collected. The primary object, from the statistical standpoint, in preparing the Classification of

Accounts and in checking the reports received is to make sure that the original data are correct. Stress is laid upon correctness of the data rather than on elaborate computation of the results in varied forms.

During the first few years, before the confidence of business men generally was obtained, reports were secured from retailers largely through personal visits of the Bureau's field agents. The only field work conducted by the Bureau now in connection with its cost research work is the preliminary survey of new fields in order to ascertain to what extent the experience and practice of other trades can be applied to the new research. In the preliminary survey careful study of the methods used by representative merchants is made to make sure that the classification of accounts conforms to best trade practice as well as to good accounting principles. As soon as a workable statement has been agreed upon and the definition of accounts standardized, the classification is published.

Soon after the close of the fiscal year in each trade in which an investigation is being carried on and for which a standard classification of accounts has been issued, schedules are mailed to from five to ten thousand merchants conducting businesses of various sizes in all parts of the United States. Accompanying the blank is a letter explaining the object of the research and, for reference, a condensed summary of the definitions of accounts. To safeguard the accuracy of the figures received a schedule of questions, designed to secure additional facts to aid in interpreting the entries in the profit and loss statement, and a financial statement are requested from each merchant. Experience has shown that answers to these questions provide an adequate safeguard on mail replies, because inaccuracies in entries for any of the major items almost certainly are brought to light by discrepancies in the answers to these questions. The questions all relate to actual practice and not to opinions. Inasmuch as the average merchant or other business man for that matter is not accustomed to careful generalization, all questions involving the expression of opinion have been discarded.

When the reports from the individual firm are received at the Bureau, they are turned over to the confidential file clerk, who enters a number on each report and on any supplementary correspondence or memorandum that may be attached to it, removing at the time all signs of identity of the coöperator. The coöperator's name and number are entered on a card which is immediately placed in the confidential file. A checker's memorandum also is attached to each report on which are entered the Federal Reserve district number, the population of city in thousands, and the name of state, to aid in classifying the reports in later tabulations.

A trained statistician goes over each report to check the accuracy of the adjustments to the Bureau's standard form. Reports on which the entries are given in round numbers, or those that in any other way are incomplete, are rejected at once. Statements on which only percentages, without the actual figures, are given also are rejected because of the impossibility of judging the reliability of the figures.

Each item is scrutinized and with the check furnished by the supplementary information given in the answers to the schedule questions, any discrepancy is detected readily. Although each statement presents a prob-

lem of its own, those items which need the closest watching are the entries showing the inclusion of the proprietor's salary, that is, Salaries and Wages for Salesforce and Buying, Management, and Office Salaries on a retail shoe statement, for example; and the entries for Rent, for Taxes—for Insurance, and for Repairs. To serve as a check for Interest on Capital Owned, the financial statement is studied and a figure for net worth, exclusive of real estate and good will, is determined on which interest, at the local rate on reasonably secure investments, is computed. If there is any doubt as to the accuracy of any figures submitted on the report, a letter asking for more detailed facts is sent to the firm from which the report was received. Occasionally several letters are necessary before a satisfactory adjustment can be made, but in practically no case has the Bureau been denied the facts, when the firm is able to determine them. The checking of the report is the major task to be performed and the one that requires the greatest amount of time and expense. The care that is exercised, however, is justified by the improvement in the quality of the results secured. All the work is done by a paid staff working full time; it is not practical to attempt to operate this organization on a part-time basis; using students whose academic duties must have the right of way.

Percentages, which are based on net sales, for each item of expense and profit as well as ratios of current assets to current liabilities, accounts and notes receivable to average monthly sales, and accounts and notes payable to average monthly purchases are then computed and a figure for stock-turn for the store as a whole is determined. To each firm is mailed a copy of the percentages computed from its own figures to be used in comparison with the summaries compiled from the reports of all firms. After these percentages have been computed for all the reports, they are tabulated on a regular form for determination of the common figure.

When the common figure sheets have been completed, the statistician in charge of the research and the professor in charge of the statistical courses in the School go over each sheet to determine the common figure for each item in each grouping. This common figure is arrived at by taking into consideration all the available data; the mode, the median, and the arithmetical average all being considered in view of the dispersion shown on the sheets. After the common figure has been determined, the highest and lowest figures for each item shown also are determined.

Plans are now under way at the Bureau for the collection of figures on 1922 operations from retail grocery, shoe, jewelry, and department stores, and from the wholesale grocery trade. While at the start the expenses incurred in this research work were paid from the general fund of the Business School, since January, 1921, the actual cost of carrying on these investigations has been paid by the trades themselves. The Bureau does not solicit contributions for these studies, but when a trade manifests sufficient interest in the results to assume the financial burden and will assure a sufficiently widespread interest on the part of its members to guarantee the submission of a workable number of reports, such research is undertaken or continued. In assuming this responsibility the Bureau safeguards the confidential use of the reports by having it definitely understood that any

material collected is to be considered as the sole property of the Bureau and is not available for consultation or other purposes, either to the association financing the research or to any other outside agency. The Bureau further reserves the right to determine what material is to be embodied in the bulletin and how it is to be presented. After publication, the results are distributed without charge to each merchant who has coöperated; to others at a nominal price.

The Bureau does not undertake special investigations for individual firms on a commercial fee basis. It obviously would be unethical for it to use the University's name in collecting information from other firms to be used for the private gain of a single firm, even if the latter paid the cost.

During the period that these studies of operating costs have been carried on many problems in store management, as well as marketing problems of wholesalers and manufacturers whose products are distributed through retail stores, have been brought to the Bureau's attention. In addition to the figures on operating expenses, therefore, a large amount of information regarding business practice and especially many problems that could be used for teaching purposes have been obtained. This accumulation of experience has been particularly valuable in helping to put the courses in Marketing and Retail Store Management in the Business School on the problem basis. For several years instruction in these courses has been exclusively by the problem method.

In December, 1920, the Bureau started the experiment of collecting problems for teaching purposes in other fields than those in which its organized research formerly had been carried on. The first subject, in which this experiment was tried, was labor relations. The success following several months' experimenting was sufficient to indicate that this sort of research was practical, and during the summer of 1921 a force of twelve men was employed to collect problems in such subjects as commercial banking, factory management, labor relations, lumbering, and retail store management. Since that time the collection of problems in practically every field of instruction in the Business School has been started. During the summer of 1922 a force of twenty field agents was employed in this work; a permanent staff of eleven agents is maintained at the present time. This research has presented many new problems of technique which gradually are being solved, and business men are taking more and more interest in it.

After the problems are collected by the Bureau they are turned over to the instructors in the School. Each instructor is expected to publish with his own editorial revision such problems as he thinks best suited to bring out the principles of his subject in classroom discussion. The Bureau does not undertake to work out solutions; it collects the facts and presents the situations as they actually arise in business administration. The present outlook is that this research will continue for at least several years to constitute the major portion of the Bureau's activities.

ROUND TABLE CONFERENCE ON AIMS AND METHODS OF COLLEGE COURSES IN TRANSPORTATION

Chairman, W. E. BUTTERBAUGH, *Syracuse University*

The Transportation Round Table brought together a representative group interested in the teaching of Transportation. The two hours proved altogether too short and were entirely devoted to the aims of transportation courses.

The Chairman opened the discussion quoting from the address of President Harding to Congress, December 8, 1922:

"No problem exceeds transportation in importance, it being the outstanding one," and from a report of President Ira W. Hallis of Worcester Polytechnic Institute on "Education and Training for the Industries," delivered to the A. S. M. E. in New York City, December 4, 1922, to the effect (1) that the present tendency is not to educate for menial positions, but to train for best citizenship; (2) that the latter calls for ability, first, to make a living, and, second, to use spare time for both professional and intellectual advancement; (3) that we do not need the "intellectual aristocracy" at present turned out by many colleges; (4) that we need fields (laboratories) for the training of these college trained apprentices.

The Chairman stated that the college teachers of transportation must decide whether they prefer to train their students or simply to teach them; to make useful and capable men out of them or simply to cram facts into them; that there is a big difference between useful students and learned students.

It was said that there was considerable indifference and some outright hostility to the employment of college trained men by transportation companies. This is a well-known fact and could not be more pronounced even if the carriers incorporated it as part of their standard practice and general policy.

The Chairman explained the reason for this as traceable to the college classroom, although the carriers are not without criticism. The institutions of learning and college teachers of transportation have mainly themselves to blame for this condition. They do not train vocationally; they are not practical in their courses. There is no higher educational institution in this country that has properly studied and solved this question; the courses of all are much too short and are purely theoretical. The only opportunity to study the practical side of transportation economics has been left to the various correspondence schools.

A very small percentage of college trained and highly educated men enter the service of carriers. They give opportunities to the engineering and the legally trained college man but the traffic department (business side of the work) is not opened up or made attractive to college men.

The colleges can partly overcome this situation and aid in solving the nation's greatest problem. To do so they must revamp and broaden their courses, making room for "applied economics" to follow the "theoretical economics"; or for a vocational structure to be built upon a foundation

of pure and elementary principles. Entire schools of transportation must take the place of the small departments now found in our larger Colleges of Business Administration; and these schools must give specialized courses in the steam railway, the electric railway, steamship, automobile, and industrial traffic; as engineering work is broken up into civil, mechanical, electrical, and chemical engineering courses.

The discussion that followed indicated the trend of courses to be slowly toward the vocational. The older professors seemed to lean toward the old established courses—those giving economic theories such as regulation policies, and more particularly designed as cultural or classical rather than vocational. The younger men seemed to appreciate the demands of the times for the practical courses following the theoretical; and they agreed that a few years of practical experience with transportation was as necessary to them as higher college degrees.

Dean Rittman of the Carnegie Institute of Technology was very decided in his satement that the colleges and universities would be forced to vocationalize their courses in Transportation within the next few years.

Among those who entered into the discussion were the following: Floyd L. Vaughan, Brown University; W. F. Rittman, Carnegie Institute of Technology; E. D. Strong, Grinnell College; J. W. Harnach, LaSalle Extension University; H. G. Shellow, Marquette University; V. Curtis, Northwestern University; L. E. Crossman, Ohio University; H. E. Hoagland, Ohio State University; Clyde O. Ruggles, Ohio State University; F. Haigh Dixon, Princeton University; L. C. Sorrell, University of Chicago; R. B. Harris, University of Delaware; E. M. Winslow, University of Iowa; I. Leo Sharfman, University of Michigan; Sidney L. Miller, University of Wisconsin; Wm. W. Splawn, University of Texas.

The meeting proved to be much too brief and was of such interest to those present that the Chairman was instructed to apply to the American Economic Association for a place on the 1923 convention program for another Round Table on Transportation.

MINUTES OF THE BUSINESS MEETINGS OF THE AMERICAN ECONOMIC ASSOCIATION HELD IN CHICAGO, DECEMBER 27-30, 1922

The first business meeting of the American Economic Association was held in the Congress Hotel, December 28, 1922, at 9 A.M., with President Seager presiding.

The reading of the minutes of the last business meeting was dispensed with, inasmuch as they were published in the March Supplement, *Papers and Proceedings of the Thirty-fourth Annual Meeting.*

The annual reports of the Secretary[1] and of the Treasurer[2] of the Association were read by Mr. Westerfield. The report of the Auditing Committee[3] was read by Mr. McDonough for Chairman Armbruster; of the Editor of the AMERICAN ECONOMIC REVIEW[4] by Mr. Dewey; of the Special Finance Committee[5] by Mr. Westerfield for Chairman Seligman. These reports were adopted and ordered put on file.

Mr. Gardner, for the Special Finance Committee, offered informally a series of resolutions, which he reported he would present formally at the next business meeting.

Chairman Marshall presented the report of the Committee on Presentation of Social Studies in the Schools. It was voted to adopt this report and the following recommendations contained therein:

1. That the American Economic Association, and the other interested associations, each authorize the appointment of one member to the board of directors of the National Council for Social Studies provided that the foregoing constitutional provisions be, in substance, put into effect by that body.
2. That these tentative formulations[6] be received by the parent societies.
3. That each society print and mail, not later than February 1, 1923, a copy of these tentative formulations to each of its members with a request for still further suggestions and criticisms.
4. That the Joint Commission be authorized to draw up and secure publicity for a final formulation of (1) the purpose of the social studies in our schools, and (2) the distinctive contribution of each field of study to that purpose.

Mr. Rossiter reported for the Joint Census Advisory Committee[7] of the American Statistical and the American Economic Associations. It was voted to adopt the report, including the three proposed resolutions, namely:

WHEREAS, The coöperation between the Bureau of the Census and the American Statistical Association and the American Economic Association, established by the appointment in 1918 of a joint committee of three from each association to advise with the Director of the Census during the Fourteenth Census period, has proved of such practical value to the Bureau that the Director of the Census has requested the continuation of such joint committee as a permanent body, therefore,

Resolved, That the report of the present Joint Committee be accepted, and that the resignations of the representatives be and hereby are accepted, and

Resolved, That this Association approve the creation of a permanent joint advisory committee to the Director of the Census to consist of six members, three of whom

[1] See p. 244.
[2] See p. 248.
[3] See p. 251.
[4] See p. 253.
[5] See p. 255.
[6] See printed *Report of the Joint Commission on the Presentation of Social Studies in the Schools,* pp. 4-8.
[7] Formerly called the Joint Committee on Federal Statistics.

shall represent this Association, and three to represent the Statistical Association, and said three representatives of this Association shall be and hereby are constituted a standing committee of this Association, and,

Resolved, That members of said joint committee representing this Association shall be appointed by the Executive Committee for terms of one, two, and three years respectively. Members shall be eligible for reappointment. Election of representatives of this Association upon the newly constituted joint committee shall take place on or before January 15, 1923, and thereafter the annual vacancy shall be filled at the meeting of the Executive Committee immediately preceding the Annual Meeting of this Association.

A vote of thanks was extended to the outgoing members of this Committee.

The President then appointed the following committees:

On Nominations: Mr. Gardner (Chairman), and Messrs. Kinley, Willcox, Carver, Fisher.

On Resolutions: Mr. Hammond (Chairman), and Messrs. Haney, Hoagland, Jacobson, and Miss Eaves.

On Honorary Members: Mr. Carver (Chairman), and Messrs. Ely, Fisher, Gardner.

Representatives on The Joint Commission on the Presentation of Social Studies in the Schools: Messrs. Marshall and Kiekhofer.

Adjourned.

The second business meeting of the American Economic Association was held in the Congress Hotel December 30, 1922, with President Seager presiding.

The minutes of the last business meeting (that of December 27) were read and approved.

The minutes of the Executive Committee of December 28 was read.[8]

Mr. Raney explained the provisions of the tariff on books and the present difficulties and dangers with respect to proposed changes in the copyright law. It was voted to refer the matter to the Executive Committee with power.

Progress was reported by Mr. Gardner for the Association's representatives to the American Council of Learned Societies; and by Mr. H. C. Taylor for the Committee to coöperate with the National Research Council on personnel. It was voted to receive these reports, to file them, and to continue the Committee.

Chairman Seager reported for the Budget Committee: the report was accepted and ordered filed.

Mr. Westerfield read for Chairman Deibler the report of the Special Membership Committee.[9] It was accepted and ordered filed.

Mr. Carver, Chairman of the Committee on Honorary Members, recommended enrolling Vilfredo Pareto of Italy and Knut Wicksell of Sweden as honorary members. The report was adopted.

[8] See report of meeting, p. 242.
[9] See p. 257.

The following resolutions were offered by Mr. Gardner to carry out the report of the Special Finance Committee:

1. *Resolved*, That the American Economic Association be incorporated and that the Executive Committee be directed to take the steps necessary to secure such incorporation.
2. *Resolved*, That the Special Committee on Finance be continued with power to add to its members.
3. *Resolved*, That the Executive Committee be authorized to appoint a Membership Committee to serve for three years, and to fill vacancies in such Committee during said period.
4. *Resolved*, That the Executive Committee be authorized, if in their judgment the financial condition of the Association permit, to appoint a paid secretary of the Membership Committee, and to appropriate not exceeding $3000 for the expenses of such Committee, including the salary of the secretary, for the ensuing year.
5. *Resolved*, That paragraphs 1 and 2 of Article III of the Constitution be amended so as to read as follows:

> 1. Any person interested in economic inquiry may, on the nomination of a member, be enrolled in the Association.
> 2. There shall be four classes of active members of the Association—members paying an annual fee of $5; subscribing members paying an annual fee of $10; contributing members paying an annual fee of $25 or more; and life members comprising those members who contribute $200 or more in a single payment. Life members shall be exempt from annual dues.

Chairman Hammond of the Committee on Resolutions submitted the following set of resolutions, which were unanimously adopted:

The members of the American Economic Association in attendance at the Thirty-fifth Annual Meeting, held in Chicago on December 27-30, 1922, wish to give an expression of their grateful appreciation of the courtesies and labors of those persons who made their stay there a pleasant and memorable one.

They wish further to thank the Local Committee on Arrangements under the chairmanship of Professor H. A. Millis; the City Club of Chicago; the manager of the Congress Hotel and Annex; and the members of the instructional staffs of the Northwestern University and the University of Chicago for their courtesies and hospitalities. They also request the Secretary of this Association to transmit to the appropriate parties copies of these resolutions and to spread upon the records of the Association this acknowledgment of their obligations for the services rendered.

(Signed) M. B. Hammond, Chairman.
Lucile Eaves.
L. H. Haney.
H. E. Hoagland.
M. L. Jacobson.

Mr. Westerfield, for Chairman Hotchkiss, reported for the Karelsen Prize Committee.

President Seager, at the request of Mr. Merriam, raised the question whether the American Economic Association desired to coöperate with other associations of social sciences in establishing a Council of Research in Social Sciences. It was voted to refer the matter to the Executive Committee with power.

It was voted to leave to the Executive Committee the determination of the time and place of the next Annual Meeting.

Chairman Gardner reported the following nominations for officers for the coming year:

For President: Carl C. Plehn, University of California.

For Vice-Presidents: Fred R. Fairchild, Yale University; Bernard M. Baruch, New York City.

For Secretary-Treasurer: Ray B. Westerfield, Yale University.

For members of the Executive Committee: Richard T. Ely, University of Wisconsin; Thomas W. Page, Washington, D. C.

For Managing Editor of the AMERICAN ECONOMIC REVIEW: Davis R. Dewey, Massachusetts Institute of Technology.

For members of the Editorial Board: Walter W. Stewart, Washington, D. C.; James E. LeRossignol, University of Nebraska.

For member of the Program Committee: Lewis H. Haney, New York City.

The Secretary was directed to cast the unanimous ballot of the Association for these nominees. He so acted.

Adjourned.

MINUTES OF MEETING OF EXECUTIVE COMMITTEE, DECEMBER 28, 1922

The third meeting of the Executive Committee of the American Economic Association was held at the Congress Hotel, December 28, 1922, at 5 P. M.

There were present President Seager, presiding, and Messrs. Ely, Gardner, Hammond, Lutz, Millis, Page, Patterson, Taylor, and Westerfield. During part of the deliberations Mr. Deibler was asked to be present.

It was voted to recommend to the incoming Executive Committee that a subcommittee be appointed to consider the advisability of creating a committee of the American Economic Association to coöperate with organizations of business men.

The Treasurer was instructed to make certain changes in the investments of the Association, namely, to procure a less speculative security than the bonds of the Republic of Haiti.

It was voted to refer Mr. Babson's offer of a prize fund contribution to the incoming Executive Committee and to recommend that they give serious consideration to the terms and conditions under which the Association should in the future accept this and other prize fund contributions.

It was voted to recommend to the Association the following change in the constitution:

That sections 1 and 2 of Article III of the Constitution be amended so as to read as follows:

1. Any person interested in economic inquiry may, on the nomination of a member, be enrolled in the Association.
2. There shall be four classes (other than honorary) of members of the Association—members paying an annual fee of $5; subscribing members paying an annual fee of $10; contributing members paying an annual fee of $25 or more; and life members comprising those members who contribute $200 or more in a single payment. Life members shall be exempt from annual fees.

The following resolutions which will be presented at the next business meeting of the Association were approved by the Executive Committee:

1. That the American Economic Association be incorporated and that the Executive Committee be directed to take the steps necessary to secure such incorporation.
2. That the Special Committee on Finance be continued with power to add to its members.
3. That the Executive Committee be authorized to appoint a Membership Committee to serve for three years, and to fill vacancies in such Committee during said period.
4. That the Executive Committee be authorized, if in their judgment the financial condition of the Association permits, to appoint a paid secretary of the Membership Committee, and to appropriate not exceeding $3000 for the expenses of such Committee, including the salary of the secretary, for the ensuing year.

Adjourned.

MINUTES OF MEETING OF EXECUTIVE COMMITTEE, DECEMBER 30, 1922

A meeting of the new Executive Committee was held at the University Club, Chicago, December 30, 1922, at 12 o'clock.

There were present: Mr. Plehn, presiding, and Messrs. Dewey, Ely, Gardner, Millis, Seager, Taylor, and Westerfield. Mr. Deibler was asked to sit with the Committee.

Voted: To refer the matter of appointing a committee of the American Economic Association on coöperation with organizations of business men, to a committee composed of Messrs. Plehn, Seager, and Westerfield; and to direct them to inquire as to the nature of Mr. Rushmore's ideas and, having determined upon the desirability of such coöperation, to report to the Executive Committee.

Voted: To appoint as a committee on policies for prize fund contributions Messrs. Ely (Chairman), Hammond, Westerfield, and Page; and to ask them to report at the next meeting of the Executive Committee, or, if found possible earlier to determine plans and policies by mail, to report to the Executive Committee by mail and ask a vote on the proposed plans.

Voted: That in the opinion of the Executive Committee it is desirable to secure a charter of incorporation in the District of Columbia, and to direct the Secretary to confer with Mr. Walker D. Hines and take such measures to secure such charter as may seem desirable.

Voted: To appoint Mr. Marshall as the representative of the American Economic Association on the National Council of Social Studies.

Voted: To instruct the Secretary to procure from Mr. Raney a statement of not more than 500 words explaining the proposed copyright law and to publish it in the AMERICAN ECONOMIC REVIEW.

Voted: To appoint Messrs. W. C. Mitchell and Horace Secrist to confer with Mr. Merriam and others relative to the advisability of creating a National Council of Research in the Social Sciences.

Voted: To hold the spring meeting of the Executive Committee on March 17, in New York City.

Voted: To instruct the Secretary to change the form of the bills for dues to provide for the four classes of active members, and to give the non-life members annually the privilege of determining which class they prefer to be enrolled with.

Voted: That it is desirable to have Mr. G. F. Warren, because of his fitness in agricultural statistics, and Mr. T. S. Adams, because of his fitness in financial statistics, to serve on the Joint Census Advisory Committee; and to authorize President Plehn to confer with Mr. Rossiter or others as to which of the two shall be appointed by the American Economic Association, and to direct him to appoint accordingly.

Voted: To authorize the Secretary to determine which of the representatives of the American Economic Association on this Committee shall serve one, two, and three years respectively.

Voted: To appropriate $1000 from the Special Membership Campaign Fund to cover the expenditures of the Membership Committee and the Secretary's office in procuring new members.

Voted: To appoint Mr. Deibler as permanent Chairman of the Membership Committee and to authorize him to name the other members of his Committee as he finds it expedient.

Adjourned.

REPORT OF THE SECRETARY OF THE AMERICAN ECONOMIC ASSOCIATION FOR THE YEAR ENDING DECEMBER 20, 1922

In order that the records of the Association may be complete and that the members may know fully what action has been taken by the Executive Committee during the year, the Secretary will include in his report the minutes of the meetings of the Executive Committee on April 29 and December 27.

MINUTES OF MEETING OF EXECUTIVE COMMITTEE, APRIL 29, 1922

The spring meeting of the Executive Committee was held at the City Club, New York City, April 29, President Seager presiding, with Messrs. Dewey, Gardner, Hammond, Lutz, Page, Taylor, and Westerfield also present.

The minutes of the last meeting were read and approved. (Dec. 30, 1921.)

Voted: That it is the sense of this Committee that it is desirable to resume payments for contributions to the AMERICAN ECONOMIC REVIEW as soon as it appears that the finances of the Association warrant such payments.

Voted: That the next Annual Meeting be held in Chicago, and that the President and Secretary be authorized to make such arrangements as seem satisfactory with respect to place of meeting and with respect to other associations meeting at Chicago.

Voted: That the Program Committee be requested to arrange sessions between Wednesday (December 27) noon and Saturday (December 30) noon.

Voted: That the Secretary be instructed to publish in the June Supplement both an alphabetical and a geographical list of members, and to place a price of $1.50 on the book.

Voted: That the Secretary be instructed to sell all numbers of the surplus publications at the list prices without discounts, by single number, volume, or set as demanded.

Voted: That the Joint Census Advisory Committee of the American Economic Associtaion be continued for another year and that the increase of the numbers of the Committee to seven by the addition of Professor Allyn A. Young be hereby authorized; that Professors Wesley C. Mitchell, W. F. Willcox, and E. R. A. Seligman be continued as the representatives of the American Economic Association.

President Seager announced the following appointments to the Budget Committee: Professor Seager (Chairman), Dr. H. C. Taylor, Professors Dewey, Hammond, and Westerfield.

Adjourned.

MINUTES OF MEETING OF EXECUTIVE COMMITTEE, DECEMBER 27, 1922

The second meeting of the Executive Committee was held at the Congress Hotel, Chicago, Wednesday, December 27, at 5 P. M. There were present: President Seager, Vice-President Page, presiding, and Messrs. Gardner, Hammond, Millis, Patterson, Taylor, and Westerfield.

The minutes of the last meeting (April 29) were read and approved.

Acting upon an offer of the Babson Statistical Organization, Inc., to present to the American Economic Association a sum of money, not exceeding $1500, with which to conduct an essay competition among college students on economic subjects, it was voted that the President appoint a committee of three persons to consider the offer and report at the next meeting of the Executive Committee; and that Mr. Baldwin, representative of the Babson Statistical Organization, be invited to attend that meeting of the Executive Committee and discuss the offer. The Chairman appointed Messrs. Ely Hammond, Page, and Westerfield as this committee.

It was voted to hold the next Executive Committee meeting at five o'clock Thursday, December 28. (See report on p. 242.

Upon the question whether the American Economic Association shall continue to send the AMERICAN ECONOMIC REVIEW and other publications free to the seventeen European economists named by Professor Seligman as in 1921 and 1922, it was voted to instruct the Secretary to continue sending them for another year.

The action of the Treasurer in investing Association funds in two $1000 Standard Gas and Electric bonds and two Republic of Haiti bonds was approved.

Adjourned.

Conforming to the instructions of the Executive Committee, the Secretary published as a supplement to the June issue of the AMERICAN ECONOMIC REVIEW, a *Handbook*, containing in its 110 pages (1) a brief statement of the history, purposes, and activities of the American Economic Association; (2) a copy of its constitution; (3) a complete alphabetical list of members and subscribers; (4) a geographical list of the same; and (5) a list of its publications.

Owing to the financial embarrassments which the Association's treasury was suffering, the publication of the *Handbook* had been suspended since 1919.

Under authority granted by the Executive Committee under date of October 7, 1921, the Secretary has sent complimentary copies of the AMERICAN ECONOMIC REVIEW to the following European economists as recommended by Professor E. R. A. Seligman:—

A. AFTALION, Lille
M. BOUGLÉ, Paris
L. BRENTANO, Munich
L. BUECHER, Leipzig
L. DIETZEL, Bonn
K. FÖLDES, Budapest
A. GRAZIANI, Naples
B. GRIZIOTTI, Catania
J. LEWINSKI, Warsaw
A. LORIA, Turin
K. MÉHELY, Budapest
W. OUALID, Strassburg
H. SCHUMACHER, Berlin
J. SCHUMPETER, Vienna
E. SCHWIEDLAND, Vienna
W. SOMBART, Berlin
V. TVERDOCHLÉBOFF, Petrograd

Professor Irving Fisher was appointed by President Seager as the representative of the American Economic Association at the 26th annual meeting of the American Academy of Political and Social Science at Philadelphia.

The Second Karelsen Prize Essay Competition, on the subject "The Relations of Capital and Labor" has been conducted by the Secretary this year. It is a pleasure to report that in this competition 114 essays were received, which are now in the hands of the committee on awards.

In the selection of the judges for the awards in this contest effort was made to get a catholicity of attitude toward the capital and labor problem, and to get men of eminence whose opinion commands approval in their respective fields. The judges are as follows:

Economist: Willard E. Hotchkiss, Director, National Industrial Federation of Clothing Manufacturers;

Public Man: Harry A. Garfield, President, Williams College, and former Fuel Administrator;

Socialist: John Spargo, Author and Lecturer;

Representative of Employers: William C. Proctor, President, Proctor & Gamble Co;

Representative of Employees: Samuel Gompers, President, American Federation of Labor.

The prizes offered for the most meritorious essays are: first prize, $1000; second prize, $500; third prize, $250. The committee has not yet made the awards.

After procuring quotations from various printing houses, the Secretary and Editor Dewey decided to change printers for the Association's publications, from the Princeton University Press to the St. Albans Messenger Press. It is hoped that this move will result in economy for the Associa-

tion, but of course the savings for the first year have been largely absorbed by the costs of moving the surplus publications from Princeton to St. Albans and by the preparation of a new set of stencils for the addressograph.

The sale of surplus publications beginning 1921 was continued until March 1, 1922. Of the unsold publications, 40 copies of each issue before 1910, 150 copies of each issue from 1910 to 1918, all copies of each issue since 1918, and many copies of each issue for which there is still a market demand were reserved and shipped to St. Albans for storage, and the remaining copies were destroyed.

The following table indicates the changes in the membership of the Association during the year.

Members and subscribers in December, 1921			2927
Annual members in December 1921		2230	
Members resigned in 1922	99		
Removed for lack of address	19		
Members dropped for non-payment of dues	58		
Annual members changed to life members	1		
Annual members, died	18	195	
		2035	
New annual members		261	
Total annual members in December 1922		2296	
Life members in December 1921	102		
Life members removed			
Changed to honorary member	1		
Died	1	2	
	100		
Annual members changed to the life members	1		
New life members in 1922	1		
Total life members in December, 1922		102	
Honorary members in December, 1921		3	
New honorary members		5	
Total members in December, 1922		2406	
Subscribers in December, 1921	592		
Subscribers discontinued in 1922	57		
	535		
New subscribers in 1922	104		
Total subscribers in December, 1922		639	
Total members and subscribers in December, 1922			3045
Net gain, 1922			118

The Secretary's office has coöperated with Professor Deibler, Chairman of the Special Membership Committee, in securing new members. As will probably be explained by Chairman Deibler, he has effected an organization comprising the whole country; but, inasmuch as the long summer vacation interrupts the activities of such an organization, it really did not become effective until November; the nominations of the various committeemen have been very numerous during December. It is the opinion of the Secretary that Professor Deibler and his committee should be continued and this membership campaign be prosecuted with vigor for several years. The effectiveness of previous campaigns has been lessened by their brevity.

The following figures showing changes in membership from 1911 to 1922 should be of interest in connection with the present campaign:

Membership, January 1, 1911				1702
Additions in 1911, 814.	Removals, 112.	Net gain, 702.	Total, 2404	
Additions in 1912, 540.	Removals, 229.	Net gain, 311.	Total, 2715	
Additions in 1913, 271.	Removals, 473.	Net loss, 202.	Total, 2513	
Additions in 1914, 294.	Removals, 338.	Net loss, 44.	Total, 2469	
Additions in 1915, 256.	Removals, 281.	Net loss, 25.	Total, 2444	
Additions in 1916, 319.	Removals, 274.	Net gain, 45.	Total, 2489	
Additions in 1917, 385.	Removals, 274.	Net gain, 111.	Total, 2600	
Additions in 1918, 374.	Removals, 296.	Net gain, 78.	Total, 2678	
Additions in 1919, 311.	Removals, 275.	Net gain, 36.	Total, 2714	
Additions in 1920, 391.	Removals, 239.	Net gain, 152.	Total, 2866	
Additions in 1921, 312.	Removals, 251.	Net gain, 61.	Total, 2927	
Additions in 1922, 370.	Removals, 252.	Net gain, 118.	Total, 3045	

Changes in Twelve Years

Additions, 4637. Removals, 3294. Net Gain, 1343.

Since 1911, average net gain per year	113
Since 1915, average net gain per year	86

The above table shows that the abnormal gains of 1911 and 1912 were followed by three years when there were net losses of membership, and that since 1915 each year has brought a net increase, the present year being second only to 1920 in that respect.

The following members have been unfortunately stricken from our list by the hand of death:

Carl E. Billquist	Robert Moore
William J. Clark	Simon N. Patten (*former President*)
Ezekiel H. Downey	Thomas M. Robertson
John H. Flagler	Mrs. Henry Wade Rogers
Walter F. Handschin	Frank A. Roper
Samuel T. Howe	Joseph H. Rushton
Orland Isbell	Delevan Smith
Levy Mayer	John L. Swayze
Harold L. Merkel	John Wanamaker

The Secretary has procured from the ex-presidents of the Association their autographed photographs, which he plans to have framed and hung in his offices as permanent property of the Association. It is believed that these will have a sentimental and historical value for the Association, and it is hoped that each retiring president will furnish the Secretary with a photograph for this purpose.

The special activities of the Secretary's office the past year include the following:

1. The editing of the March Supplement containing the Papers and Proceedings of the Thirty-fourth Annual Meeting.
2. The preparation of the Association *Handbook* published as a Supplement in June.
3. The sale of surplus publications from the stock at Princeton and the removal of a portion of the unsold stock to St. Albans.
4. The revision of the mailing list and the preparation of a complete set of new stencils for the addressograph.
5. The preparation of careful, detailed stock inventory records.
6. The conduct of the Second Karelsen Prize Competition.
7. Coöperation with the Special Membership Committee; among the activities in this connection several large mailing lists were circularized.

Respectfully submitted. Ray B. Westerfield, *Secretary.*

ANNUAL REPORT OF THE TREASURER

The following exhibit presents the cash receipts and expenditures of the American Economic Association for the year ending December 20, 1922. The statement should be interpreted in connection with the balance sheet and income statement rendered by the Auditing Committee, and the report of the Editor of the AMERICAN ECONOMIC REVIEW.

CASH RECEIPTS AND EXPENDITURES

Cash on hand December 20, 1921			$ 4,971.33
Receipts			
Membership Dues		$11,125.35	
Subscriptions		2,935.53	
Sales of Publications		1,060.65	
Reprints		7.13	
Interest		998.78	
Maturing Bonds		2,000.00	
Deficit Fund Pledges		255.00	
Prize Essay Publication Fund			
Clarence A. Vernam		1,327.07	
E. A. Karelsen, 2d Prize Fund		1,750.00	
Profit and Loss		23.98	
			21,483.49
			$26,454.82
Expenditures			
Dues to Amer. Council of Learned Societies		$ 116.75	
Expenses of Committees		196.38	
Furniture and Fixtures		5.85	
Investments		3,830.00	
Paper Stock		1,119.03	
Publications—			
Review Printing	$3,573.87		
Review Editorial	1,500.00		
Review Expenses and Supplies	1,684.77		
	$6,758.64		
Proceedings and Handbook	1,612.98		
Prize Essays	1,327.07		
Sundry Publication Expenses	955.30		
		10,653.99	
Secretary's Office			
Traveling Expenses of Secretary	$ 36.96		
Office Salaries	3,066.15		
Stationery and Office Printing	149.12		
Office Supplies	53.52		
Office Postage	460.77		
Telephone and Telegraph	66.43		
Express and Cartage	4.46		
Annual Meeting	351.98		
Miscellaneous Expenses	31.50		
		4,220.89	
Insurance		66.75	
Storage of Publications		212.50	
			$20,422.14
Cash on hand, December 20, 1922			
Central Trust Company		$ 3,258.68	
First Nat'l Bank		2,769.75	
Money Order not deposited		4.25	
			6,032.68
			$26,454.82

During the year a $1000 United Fruit Company bond which the Association held was called and $1000 of Victory notes matured. The Treasurer purchased through H. M. Byllesby & Company, of New York, two $1000 Standard Gas and Electric Company 7 per cent bonds, due 1937, at 95; and through the National City Company, of New York, two Republic of Haiti 6 per cent $1000 bonds, due 1952, at 96½.

The investments of the Association now amount, at cost, to $14,628.70, and the balance in the savings bank to $3258.68; making a total of $17,887.38 of earning assets. The bank balance subject to check amounted to $2774 on December 20: some interest is also realized on this balance but it is, of course, a fluctuating amount. Against this total of $20,661.38 of available assets, it must be kept in mind that the Association holds $1750 of the Karelsen Prize Fund contribution, which will be paid out the coming year as soon as the winners are sleected by the Committee on Awards.

It is a pleasure to state that this year the receipts have exceeded the expenditures by $134.19. The total cost of the publication of the AMERICAN ECONOMIC REVIEW was $7980.05 as against $9003.94 the preceding year, being $581.75 less for paper and $269.95 less for printing. The total cost of publishing the supplements was $2088.92 as against $1434.96 in 1921, an increase of $653.96. However, the cost of issuing the extra supplement in June, namely, the HANDBOOK, was $677.05—$524.99 for printing and $152.06 for paper—and more than accounts for that increase. In sundry publication expenses there was an increase of $695.81, principally caused by the expense of crating and shipping the Association's surplus publications from Princeton to St. Albans, the revision of the mailing list and preparation of a complete set of new stencils for the addressograph.

The economies sought in change of printer from the Princeton Press to the St. Albans Messenger Press were absorbed the first year by the expenses of moving. The publication of the Association HANDBOOK and the extra work occasioned by the change of printer have also forced the Secretary to expend more money for clerical and stenographic assistance.

Although the Association has come through the year with a narrow surplus of receipts above expenditures, the financial problem is not yet solved. The reduction in the size and scope of the AMERICAN ECONOMIC REVIEW, the failure to pay contributors to the REVIEW, and the limitation of the usual and proper functions of the Association are not the best way to equalize receipts and expenditures. The income of the Association must be increased. The present membership campaign should be continued with increasing zeal, and an endowment should be solicited. It is hoped that the Special Permanent Finance Committee will propose means to these ends.

Based on the averages for the past three years and on predetermined expenditures for the coming year, the Treasurer offers for the consideration of the Budget Committee the following estimates of receipts and expenditures for the year 1923:

Expenditures:

a) Secretary's office expenses:—		
Traveling and other expenses of the Secretary and committees	$ 195.00	
Salaries of editorial and clerical assistants	2,850.00	
Postage, stationery, and office printing	460.00	
Annual Meeting	250.00	
Miscellaneous expenses, including new typewriter and new desk	400.00	
		$ 4,155.00

b) Publication of Supplements:—			
Paper	$ 350.00		
Printing (one Supplement, 240 pp.)	960.00		
		1,310.00	
c) Sundry publication expense (filling orders and care of mailing list)		300.00	
d) Publication of Review:—			
Editor's salary and clerical assistants	$3,250.00		
Editorial office supplies	325.00		
Paper	1,300.00		
Printing of Review	3,600.00		
		8,475.00	
e) Storage and insurance		220.00	
f) Dues to American Council of Learned Societies		110.00	
g) Contingent expense fund		480.00	
Total			$15,050.00
Receipts:—			
From dues		$10,920.00	
From subscriptions		2,980.00	
From interest		1,000.00	
Sundry profit and loss		150.00	
Total			$15,050.00

Respectfully submitted.

RAY B. WESTERFIELD, *Treasurer.*

REPORT OF THE AUDITING COMMITTEE

New Haven Connecticut, December 23, 1922

To the American Economic Association:

We have examined the books and accounts of the American Economic Association for the fiscal year ended December 20, 1922, and find that the blaance sheet presented below and the accompanying relative income statement and surplus account are correctly prepared therefrom.

Paper stock and investments have been valued at cost, and we have verified the investments and cash by actual inspection or by certificates from the depositories. The reserves for membership dues receivable and accounts receivable are, in our opinion, sufficient to care for defaults.

We certify that, in our opinion, the balance sheet is properly drawn up so as to show the financial position of the Association on December 20, 1922, and the accompanying relative income statement fairly states the results for the fiscal year ended at that date.

Respectfully,

A. H. Armbruster.
John D. Häuslein.
John E. McDonough.
Auditing Committee.

Balance Sheet as at December 20, 1922

Assets			*Liabilities*	
Cash in New Haven Bank and on Hand		$ 2,774.00	Membership Dues Prepaid	$ 446.25
Cash in Savings Account, Central Trust Company Cambridge, Mass.		3,258.68	Life Memberships	3,700.00
Investments		14,628.70	Deficit Fund Contributions	255.00
Membership Dues Receivable	$1,367.25		Karelsen Prize Fund Contribution	1,750.00
Less Reserve for Mem. Dues Rec...	500.00		Surplus	15,959.88
		867.25		
Accounts Receivable..	258.19			
Less Reserve for Bad Accounts Receivable.	77.44			
		180.75		
Paper Stock		89.10		
Furniture and Fixtures		312.65		
		$22,111.13		$22,111.13

Income Statement for Year Ended December 20, 1922

Ordinary Income			
Dues		$11,366.10	
Less Defaulted Dues		467.50	
		$10,898.60	
Interest			
On Investments	$ 734.45		
On Bank Deposits, etc.	264.33		
		998.78	
Sundry Profit and Loss		150.84	
			$12,048.22

Ordinary Outgo:			
Office Salaries	$ 3,066.15		
Traveling Expenses of Secretary	36.96		
Stationery and Office Printing	149.12		
Postage	459.63		
Office Supplies	53.52		
Telephone and Telegraph	66.83		
Expressage	4.46		
Annual Meeting	351.98		
Dues to American Council of Learned Societies	116.75		
Miscellaneous	31.50		
Expenses of Committees	196.38		
		4,533.28	
Excess of Ordinary Income			$ 7,514.94
Publication Outgo:			
Printing	$ 4,795.28		
Editorial	1,500.00		
Editorial Expenses and Supplies	1,684.77		
Proceedings and Handbook	2,088.92		
Sundry Expenses of Printers	955.30		
Storage of Publications	212.50		
Insurance	66.75		
		$11,303.52	
Publication Income:			
Subscriptions	$ 3,128.28		
Less Defaulted Subscriptions	153.75		
	$ 2,974.53		
Sales of Publications	948.24		
		3,922.77	
Excess of Publication Outgo			7,380.75
Net Surplus for year			$ 134.19

SURPLUS ACCOUNT, DECEMBER 20, 1922

Balance, December 20, 1921			$ 5,803.44
Additions:			
Net Surplus for Year as shown in the Income Statement for Year Ended December 20, 1922		$ 134.19	
Transferred from Deficit Fund: representing net amount contributed during 1921		10,222.25	
			10,356.44
			$16,159.88
Deductions:			
Transferred to Life Memberships			200.00
Surplus per Balance Sheet December 20, 1922			$15,959.88

REPORT OF THE MANAGING EDITOR OF THE AMERICAN ECONOMIC REVIEW FOR THE YEAR ENDING DECEMBER, 1922

The cost of the REVIEW during the past year was $7980.05, as compared with $9003.94 in 1921, a reduction of $1023.89. This saving has been in large part due to the reduced cost of paper. In 1921 this item amounted to $1773.76, and in 1922, to $1192.01. The balance of the saving, $442.14, is in part due to a slight reduction in the number of pages printed. During the past year 752 pages were issued as compared with 772 in 1921. In the hope of reducing costs, the printing was transferred at the beginning of the year from the Princeton University Press to the St. Albans Messenger Company, St. Albans, Vermont.

By principal items the cost of the REVIEW during the past year has been as follows:

Salary of editor	$1500.00
Clerical assistance	1370.00
Supplies	314.77
Printing (including paper)	4795.28
	$7980.05

As in 1921, no payments were made to contributors.

For the next year, the following estimate of cost based upon printing 800 pages, and the same number of copies as now printed (approximately 3500) is submitted:

Printing	$3200.00
Paper	1200.00
Reprints, postage, etc.	500.00
Editorial	1500.00
Clerical assistance	1500.00
Supplies	400.00
Total	$8300.00

If payment to contributors is resumed, $1500 in addition is desired, making a total of $9800.

The following persons have served as editors: Professor Julius H. Parmelee and Professor Carl C. Plehn, whose terms expire this year; Professor David A. McCabe and Professor O. M. W. Sprague, whose terms expire in 1923; and Professor B. H. Hibbard and Professor G. A. Kleene, whose terms expire in 1924.

Professor N. R. Whitney has very kindly undertaken the abstracting of periodicals on "Money, Prices, Credit and Banking," and Mr. E. S. Gregg, the abstracting of periodicals on "Shipping."

During the past year 119 persons have coöperated in writing for the REVIEW, including leading articles, communications, reviews, document notes, and periodical abstracts.

Appended are the comparative tables showing the distribution of contents and cost by principal items, in continuation of tables previously given.

DAVIS R. DEWEY,
Managing Editor.

TABLE 1.—PAGES GIVEN TO EACH SECTION

Year	Leading articles	Reviews	New books listed	Documents, reports, etc.	Periodical abstracts	Notes	Doct. diss.	Totals
1911	342	304	62	89	133	40	8	978
1912	291	298	101	110	186	41	11	1038
1913	347	268	104	141	167	43	8	1078
1914	327	243	136	113	166	35	10	1030
1915	314	257	90	142	144	42	14	1003
1916	388	256	91	90	140	46	13	1024
1917	378	192	110	127	120	42	15	984
1918	372	157	91	112	99	41	17	906
1919	373	163	154	103	95	47	12	948
1920	387	109	155	98	122	42	15	936
1921	331	103	133	39	117	38	11	772
1922	293	91	159	35	124	37	13	752

TABLE 2.—EXPENDITURES

Year	Printing, including paper	Salary of editor	Payments to contributors	Clerical	Supplies	Totals
1911	$2,495.18	$1,500.00	$1,320.25	$865.50	$413.51	$6,730.59[1]
1912	3,220.83	1,500.00	1,114.50	794.58	292.68	6,922.90
1913	3,328.01	1,500.00	1,269.35	983.09	325.10	7,404.55
1914	3,023.62	1,500.00	1,312.25	1,236.29	459.18	7,531.34
1915	2,834.91	1,500.00	1,210.00	1,171.87	286.86	7,003.64
1916	3,257.27	1,500.00	1,422.50	1,173.93	339.86	7,694.06
1917	3,762.37	1,500.00	1,267.00	1,151.30	326.01	8,006.68
1918	3,497.73	1,500.00	1,203.25	1,260.06	332.73	7,793.73
1919	5,049.50	1,500.00	1,231.50	1,325.93	347.84	9,454.77
1920	6,656.31	1,500.00	1,122.75	1,595.64	307.20	11,181.90
1921	5,646.97[2]	1,500.00	64.50	1,472.50	319.97	9,003.94
1922	4,795.28[3]	1,500.00	.....	1,370.00	314.77	7,980.05

[1]Includes $136.15, traveling expenses of editors.
[2]Includes $1773.76, cost of paper.
[3]Includes $1192.01, cost of paper.

REPORT OF THE SPECIAL COMMITTEE ON FINANCE OF THE AMERICAN ECONOMIC ASSOCIATION

As a result of the authorization given to the chairman of the committee at the last annual meeting, he asked Professors Ely, Farnam, Hollander, Taussig, and President Kinley to help him in the work of the committee. The $10,000 which were raised a year or two ago served to pay off our debt and to add a substantial sum to our invested funds so that we have been able during the past year almost to balance our budget. In order to accomplish this, however, the Association has been obliged to exercise economies which have cramped its activity. It has been obliged to decrease the size of its REVIEW; to abandon the payment of even modest honoraria to its contributors; and to curtail its efforts to secure new members.

At a meeting of the committee held in November in New York, the following recommendations were agreed upon:

The committee recognizes the immediate need of larger funds for the Association. These funds should be supplied not only through an endeavor to increase the permanent invested funds and especially in the shape of an endowment fund, but also through an increase in the membership. In order to make possible a large endowment fund, the committee recommends that the Association be incorporated. In the meantime earnest efforts should be made to increase the membership. In order to provide for a much desired continuity of effort, we recommend that the membership committee be constituted of members who will serve for three years, and that the chairman of the membership committee shall be *ex officio* a member of the Executive Committee. We also recommend that a permanent secretary be secured for the membership committee in order to wage an effective campaign for an increase of membership.

The committee estimates that the cost of the permanent membership secretary would be about $3000. Inasmuch as it is highly desirable to reintroduce the practice of paying for articles and reviews and of strengthening the publications in other respects, which will cost another $2000, the committee believes that an attempt should be made to raise a fund of $5000 for three years. At the end of that time it is hoped that our membership will have been increased to such a point as to render us self-supporting.

The committee has therefore invited all the former subscribers to the $10,000 fund to contribute to this new three-year $5000 fund. Owing to some unforeseen delays, the invitations were sent out only very recently. Up to date out of forty-seven invitations fourteen replies have been received, with one three-year contribution of $250 and with four annual contributions of $100, making a total received to date of $650. In addition six contributions amounting to $800 have been received for the current year, making the total for the first year $1450.

In order further to strengthen the financial condition of the Association, your committee recommends that the membership of the Association be divided into three classes—members, with an annual fee of $5; subscribing members, with an annual fee of $10; and contributing members, with an annual fee of $25 or more. The committee feels confident that many members of the Association who can afford to do so would enroll in the two higher classes of membership. The committee recommends, therefore,

that the entire membership be canvassed with a view of securing as many as possible of the new classes of members.

We recommend that this committee be continued for another year. Inasmuch, however, as the chairman of the committee sails for Europe in January, 1923, to be gone for eight months, it is recommended that some other chairman of the committee be appointed.

EDWIN R. A. SELIGMAN, *Chairman.*
R. T. ELY.
H. W. FARNAM.
J. H. HOLLANDER.
D. KINLEY.
F. W. TAUSSIG.

REPORT OF THE MEMBERSHIP COMMITTEE

The following brief report from the Membership Committee presents what has been done by the committee. There has been organized in most of the states and in three of the Canadian provinces a membership committee. In some of the more populous sections of the country, especially where there are large cities, two committees have been formed within a state, so that there are now forty-six such local committees at work.

In each instance a chairman was found and he was requested to select four or five persons who he felt would take an active interest in extending the membership of the Association. Altogether about 125 persons have signified their willingness to coöperate in this project. We have turned our attention toward graduate and advanced students, to bankers, and lawyers, and to associations of business men where there has been any indication that a library or a research department was maintained. In one state the list of teachers of economics in the high schools has been compiled and the persons solicited. The purpose has been to bring the Association to the attention of those persons or associations most likely to become permanently interested in its work.

This constitutes the work of the committee. In some instances the chairman of the local committee has reported to me the success of his efforts, and these have been as a rule encouraging. The results, of course, are registered with the Secretary of the Association. However, I have confidence to believe that the influence of this organization will be felt throughout the present college year and a net addition to the membership of the Association will be shown.

Through the efforts of the committee 153 members have been added to date. There have been 591 recommended.

Respectfully submitted.

F. S. DEIBLER, *Chairman.*

Memorial to Former President Simon N. Patten

ADDRESSES BY FRIENDS OF DR. PATTEN
AT THE ANNUAL MEETING HELD IN
CHICAGO, DECEMBER 29, 1922

RECOLLECTIONS OF THE LIFE AND WORK OF PROFESSOR SIMON N. PATTEN

By Richard T. Ely

My acquaintance with Patten began in the summer of 1877 in Halle. He was then finishing his studies in Germany and I was beginning mine. Patten was a connecting link in Halle between Dr. E. J. James, who had just left for the United States (having received his Ph. D.), and myself. My connection with Patten and his activities was continuous from that time practically until his death.

I have been reviewing in my mind the impressions produced upon me by Patten's personal characteristics, the experiences of his life as they fell under my observation, and his scientific bent and achievements. Let me at once say that the result of this contemplation of the finished life heightens my impression of its significance for the history of economics in the United States. But before going on to speak of Patten's place among economists let me say a word about Patten on the personal side.

Patten's life was the simple one of the scholar; but one not entirely devoid of dramatic incidents touched with a certain tragic pathos at times. I remember meeting him in Halle, where I was an entire stranger. The impression that I had was that of a man overflowing with kindness. He was eager to help, and I owed a great deal to him at this time in my life. He introduced me into the cultured family of Frau Pastor Lange, whose daughter Margarethe had become engaged to Dr. James. Mrs. Lange's father had had a career as a professor in the University, and the family had acquaintances among the cultured people in the city. As I think of his helpfulness, one thing that stands out in my mind is his pleasure in any least bit of personal success on my part. He was ever a good friend and wanted to help not only human society in general, but he coupled with this general and warm humanitarianism a personal devotion to those with whom he came in contact; and the two (as we all know) do not always go together.

Patten desired companionship, and particularly did he long for an understanding of his efforts and sympathetic coöperation in self-expression. A tragic element in his life, it seems to me, came from the fact that his marked individuality and a certain lack of flexibility too often kept him from that closeness of personal companionship and intellectual coöperation that he desired. He wanted to coöperate with others, and he did to some extent, but he never found the one whom he most needed to aid him in full self-expression and in making the world understand fully the message that he had to give.

One of Patten's services was his participation in the formation of the American Economic Association of which he was always a loyal adherent, although the program adopted was quite different from that which he and Dr. James had elaborated and which he had especially at heart. His own papers, published by the American Economic Association, are very important contributions and represent developments in his own thought. I mention particularly the paper which he presented at the Philadelphia meeting of our Association in 1888, the one on Malthus and Ricardo. In re-reading it in preparation for this paper I was struck anew with its strength. It is in many ways a masterly presentation. But what I especially wish to say is this: when he presented that paper I watched the faces of the economists present and I felt that then and there he gained a place among the economic thinkers of our own country. There could no longer be any question that Professor Patten was to be reckoned with as one of the American economists.

I have been looking through my correspondence with Patten and I find some things of special interest, but not so much as I had hoped. One letter written on October 22, 1909, gives the impressions produced on him by Germany, and the changes in his outlook upon life and science brought about by the years in Germany. Patten had gone to Germany from the Corn Belt of the United States. He was brought up in Sandwich, Illinois, on a farm, and illustrated in his own person that influence of environment which we all illustrate and which he emphasized. The letter to which I refer I quote as follows:—

Dear Ely:

The attitude of those of us who went to Germany to study 30 years ago differed from the attitude of the same men who later formed the American Economic Association in that the former was negative while the latter was positive. I had little notion of what I was to see in Germany when I went but I had very definite notions when I returned. I was tired of American politics and traditional religion, and even more disliked classical studies. It was a craving for a broader view that lured me to Germany, and while there I learned to base my thought on the world's experience instead of on conventional English ideas. The study of history did even more for me than that of economics. I came back in open revolt against the traditional concepts of our race and found the narrow self-satisfied attitude of the American very trying. The American Economic Association was a protest not only against the narrow English economics but also against the current political and social ideas. It has narrowed its functions since the Political Science Association and the Sociologists have split off from it. We combined in ourselves all three of these functions and the influence of the Association in its early days was as much in politics and sociology as in economics. The fruit of our efforts is not only the changes in the field of economics, great as it is, but also the social and political changes that were bound up with them. It is hard to reproduce this general attitude because

we have all become specialists, but this broader viewpoint represents the attitude of those who strove to form the new Association.

Cordially,

S. N. PATTEN.

A little later in the same year he wrote me another letter commenting upon a paper that I had written about the history of the American Economic Association. I think, too, it is well to quote this, although I must say incidentally that I think he did not quite understand my position to which he referred, and from which he dissented to a certain extent. This letter, like the preceding one, has significance in the development of economic thought. It is as follows:—

You do not emphasize enough the cause of the Association in the state of opinion that then prevailed, the wordy conflicts between free trade and protection advocates, and the endless harangues on paper money; a public that would hear nothing else, and a press that knew of no other public issues. To say these things plainly may still arouse some antagonism, but you are writing for a future audience and should make plain why we felt that we should stand shoulder to shoulder in an earnest conflict.

The second impression is, you underestimate the maturity of thought of those who created the Association. We were not a group of school boys, but earnest, mature men with plans as definite and as various as have since appeared.

Clark, Walker, James, Adams, Jenks, ourselves, and others had the germs of future growth well started in 1885. Each had shown the line in which he was to move, and there was as much divergence in 1885 as today.

You assume too simple a state of affairs when you assume that we all accepted as a slogan the historical school or any other mode of thought we inherited from our school days. We were not German students but American thinkers that united to form the Association.

In apparent opposition to this statement of diversity of belief, but yet in perfect harmony with it, is the fact that we all wanted a program of some sort so as to express more sharply our differences from the dominant school of thought that we were all squarely opposed to and meant to fight even to the last ditch. We knew we had a struggle before us and we wanted no doubt as to our unity and who our enemies were.

All this is perfectly true, and yet only a few years later when the victory was won, we no longer wanted a partisan attitude but one of scientific impartiality.

Patten thought that in my statement of the aims and purposes of the association that we were founding (which became the American Economic Association) I did not speak strongly enough in our dissent from Doctrinaire Free Trade. In this connection I quote from an earlier letter written from Sandwich in 1885:—

I am a strong advocate of restrictions on trade. I do not see what we can do or how we can accomplish anything without restricting trade. It seems to me the very object of our Association should be to deny the right of individuals to do as they please and that of course is restricting trade.

What Patten refers to is evidently the statement that in the "study of the industrial and commercial policy of government we take no partisan attitude. We believe in a progressive development of economic conditions which must be met by corresponding development of legislative policy."

This will recall to the attention of all of us who knew Patten that he was in principle a protectionist. There may have been those who associated his doctrine of protection with the fact that he was a professor in Pennsylvania (the stronghold of protectionism) but it is more than an absurdity—it is an injustice to an open-minded thinker—to suppose that he was swayed by any unworthy motives. The principle of protectionism was an essential part of his theory. It is appropriate on this occasion to mention that General Francis A. Walker, the president of the Massachusetts Institute of Technology, conceived a great admiration for Patten on several accounts, but especially on account of his scientific advocacy of protectionism. Although General Walker dissented from Patten's views concerning protection and free trade, he said very emphatically that he would very much like to have Patten on his faculty if there were room for another economist, in order to have an advocacy of protective tariff strictly from a scientific point of view.

After returning to this country, the first time I met Patten (if I recall correctly) was in 1885 when I was visiting Pullman and writing an article on the peculiarities of that place. I recall how helpful he was in getting at the true feeling and attitude of the employees and in finding out the real nature of this experiment—an experiment not a complete success but one which perhaps we were inclined to criticise somewhat too severely, not fully appreciating certain good features. I remember at this time Patten and Mrs. Ely, then a bride, developed a taste for buttermilk—for the reason that they found the man who sold the buttermilk was talkative and a good deal of information was derived from him, as well as from a shoemaker who repaired shoes that with surprising frequency seemed to demand attention. What I especially recall, however, was the manuscript of his book *Premises of Political Economy*, which he brought with him and which was his first published book. We went over this together and I think it occupies a position of significance in the history of economic thought in this country. It illustrates, also, the method of Patten, and the subsequent history of the book some of his limitations.

Speaking of a bride's experience, I am reminded of an incident. We had not been married long before we had the good fortune to entertain Professor Patten as a guest in our Baltimore home. Mrs. Ely had heard the discussion of Patten's theory of economics and gathered the impression that it would be a great thing to help lower

the rent of land and thus alleviate the distress in the country by turning from wheat bread to corn bread. It was not a difficult undertaking for the Virginia girl, accustomed to many varieties of corn bread; so we provided Professor Patten generously with the great variety of breads made of corn meal, and, of course, of white corn meal —the only proper kind for Southern bread. Unhappily, the food that we set before him in our efforts to reduce the rent of land did not seem to agree with him, for he was quite ill in the middle of the night, and the next morning was obliged to return home. This was a sad end of the early efforts in our household to reform society by a diet corresponding to American conditions.

Patten was a deductive thinker. He wanted to establish a new economics more calculated in his opinion to promote human happiness than the old economy of the English; but he used to argue that the classical economists and their adherents in this country must be met deductively. Deduction had to be overthrown by deduction, in his opinion, and could not be successfully controverted by statistical and historical studies. His aim, then, was to find flaws in the deductive arguments of his opponents and to establish new thories deductively.

Perhaps, after all, there was not so much difference between Ricardo and Patten as the latter thought. If there was so much difference this was not clearly enough brought out in his *Premises*. It always seemed to me that the book needed further elaboration and development of the lines of reasoning started in the work. When he once came to me with a suggestion of republication, after the publisher's copies of the book had been destroyed by fire, I suggested that he revise and rewrite the book, carrying out to more logical completion his arguments. He found it, however, impossible to do this.

In connection with the possible rewriting of *Premises of Political Economy* the following quotation from a letter dated February 27, 1909, is interesting:—

> It has always been a dream to rewrite economics and bring it in a well worded form up to date—to do for Mill what he did for Adam Smith. I am however further than ever from the realization of the dream and somewhat doubt my capabilities for such work. I get too much absorbed in particular discussions and am also developing my views too rapidly to round up at any one stage.

Having what has come to be known as a single-track mind, he never was able to bring together into a systematic whole his various lines of reasoning so as to give the economists and the world at large a complete and full idea of his system of thought, presented with all the force that really inhered in it. In going over his various writings, I have the feeling that no one of us really has a complete understanding of Patten, and no one can know the full force of his work until we have

a systematic presentation of it as a whole. It seems to me if some one of our younger thinkers would read Patten and thoroughly digest him and present his views as a whole with all the force that they have, he would render an immense service.

I once gave a very brief summary of Patten's views and I append my summary to this presentation. I do so especially because this was submitted to Professor Patten and has been endorsed by him as correct. While it did not bring his views down to date, it gives what is most essential in them, even up to his last writings.

Patten's writings were read by the few, but he wanted them to reach the many. In one of his letters to me, dated February 17, 1895, he said; "There is no reason why our science should not appeal to hundreds of thousands if we can work out the right basis on which to present it."

Patten was always seeking for some surplus fund of wealth, out of which could come the economic basis for a higher, better, and more widely diffused civilization. He found a fund everywhere in our productive field which was a surplus fund, and which he called monopoly gain. Monopoly force was power to participate in this surplus. This surplus was rapidly increasing with the progress of economic society and was bringing about the passing from the deficit or pain economy, such as Ricardo and his friends had in mind, to a surplus or pleasure economy of the present and future. It was through wise consumption that this surplus fund could be increased and through wise consumption it could be widely distributed. From beginning to end we have this thought running through his writings. We must so establish our habits of consumption in this country as to correspond with our conditions and to decrease cost and increase surplus. The elements of truth in this view have not, in my opinion, been fully appreciated. Especially to be recommended is the bringing of costs into connection with income, for the failure to do this has led to many serious mistakes. These have grown upon me, as I have given my own attention to the rent of land, in the discussion of which increment is so often considered without costs.

One way to get hold of this surplus and to use it in the promotion of the general interest is through taxes, and he held that indirect taxes carefully laid would come largely, if not wholly, out of this surplus or monopoly fund. He advocated a very considerable use of indirect taxes upon economic activities within the country, as well as indirect taxes upon imported articles. This is all a part of his theory, and again (if I may venture to express my own feeling) I would say that the strength of his argument for indirect taxation has never met with full appreciation. When we come to frame a system of taxation which will correspond to our present enormous public expenditures comprising a large percentage of all the wealth produced, we shall

have to find a place for indirect taxes, as a part of a progressive economic platform. When the time comes for such an elaboration of the theory of taxation it will be well to consult again Patten's volumes.

We all know that economics used to be described as the "dismal science," and the economists have often been regarded as carrying hard-headedness so far as to make it hardness of heart. But when we read the personal history of economists we find that they were generally men of sentiment—men whose hearts were warm with humanitarianism. Adam Smith died lamenting that he had not been able to do more for mankind. Nassau Senior tells us this: "When I was about five and twenty I determined that I would reform the condition of the poor in England." Alfred Marshall, still happily our contemporary, shows in the opening pages of his *Economics* that his aim for his science is the abolition of poverty. President Francis A. Walker, in conversation with me, once clearly intimated that he felt weighed down by an almost intolerable load as he contemplated the human misery upon which as an economist he was obliged to reflect. Surely we need not blush for the high-mindedness and humanitarian aspirations of those men who have helped to make economics what it is; and among these men Professor Simon N. Patten has an honored place as a man and as a scholar.

Professor Patten had the very natural desire that each generation should be an improvement upon the preceding one and thus human society might advance from present conditions to a better future. I recall very well soon after the birth of my first-born, which was contemporaneous with the birth of the American Economic Association, Professor Patten urged that the boy be brought up to be an improvement upon the present generation, remarking that if we could all bring up our children to be an improvement upon ourselves the world would go forward.

Appendix[1]

Among many American economists who are contributing to the advance of this line of thought Professor Patten, of Philadelphia, deserves prominent mention. Insisting upon the necessity of studying the subjective causes of economic phenomena, he is helping to found a subjective school of economics, laying chief stress on man, and subordinating more than ever has been done before external nature to man. He has rendered especial service to the science in the emphasis he has laid on the study of consumption and changes brought about in all the conditions of economic life by changes in man's habits of consumption. This is a field in which little has been done, and the importance of which can be scarcely overestimated, though the obscurity of its phenomena renders their study difficult. Economic writers have frequently referred to this subject, and then made no use of it in the development of their systems, because it

[1]From Ely's *Outlines of Economics*, edition of 1900.

was something apart from the main current of their thought. It is different with Professor Patten. The theory of consumption is with him the root doctrine out of which his entire economic system naturally grows. The two works of his to be especially mentioned in this connection are his "Consumption of Wealth" and his "Theory of Dynamic Economics." Another truth emphasized by this writer is the importance of studying the laws of change in human society rather than simply the laws which govern it in equilibrium.

In this place especial attention is called to Professor Patten's theory of prosperity. It is, in brief, as follows: The prosperity of society is measured by surplus utility, which is the difference between the costs and the utilities of goods. Cost means sacrifice from the social standpoint, the pain, the economic energy expended. Utilities we have already considered. Whatever increases utilities, other things being equal, increases social surplus; similarly whatever lowers costs, other things being equal, increases social surplus. What then are the causes increasing utilities? Variety of consumption as seen in increasingly harmonious consumption is one. A large number of commodities suitably related in consumption increases pleasure derived from consumption, and therefore utilities. The consumption of commodities which give pleasure and sustain life at the same time increases pleasure over the consumption of articles which merely sustain life. Well-prepared food may thus be contrasted with poorly cooked food, beautiful garments with ill-fitting clothing, etc. The socialization of consumption is one of the most important means of increasing utilities. By this we understand the common use of goods and services. Paintings in public galleries afford indefinitely greater pleasure than the same pictures in a private house. Beautiful objects of nature have their utility increased by socialization. When the land in New York surrounding Niagara Falls was purchased by the state the utilities of this natural wonder were increased. Coöperation in consumption increases utilities. This is a form of socialization. Men combine to secure services. The post office is an illustration. The same cost secures far greater utilities by coöperation in transportation. Musical entertainments, schools, public worship, and many other departments of our economic life, and, in fact, of our social life in general, serve as illustrations. Inclusive rather than exclusive pleasures must be our aim. Fuller utilization of existing resources by economies increases the social surplus as well as the utilization of new resources. A larger command of natural forces increases the supply of utilities, and thus the surplus.

On the other hand, a decrease of costs may be brought about in many ways, which may be summed up under the general head "Better Industrial Organization." The division of labor so well described by Adam Smith is one form which this improvement takes. The territorial division of labor is another. Improved industrial leadership is still another. Increased capital facilitates industrial organization.

This increasing surplus is a monopoly fund, and this monopoly is found everywhere in our industrial field, and the problem of a better distribution finds its heart in the disposal of this surplus. What use shall be made of it? It is chiefly a social product to be socially controlled, and wise taxation is one of the means advocated by Professor Patten. Such taxation will favor the dynamic forces in society.

PROFESSOR PATTEN

By John B. Clark

The group of founders of our Association is becoming small, but none have gone from us whose influence has not survived them. All still live and teach. Francis Walker, Charles Dunbar, Henry C. Adams, Richmond Mayo-Smith, Alexander Johnson, Andrew D. White, and E. Benjamin Andrews have now been joined by Simon Patten, whose name stands preëminently for the founding of both institutions and schools of thought. The American Economic Association and the Wharton School were founded almost concurrently and both, if not avowedly schools of thought, at least encouraged a breaking from old limitations and a bold advance into new territory. From the first, Professor Patten's teachings were, above all else, original and this invited a like spirit in his pupils. Opening new roads to truth is the best thing a scientist can do; and, next to that, is opening routes that depart from beaten tracks and lead one in the direction of truth whether they bring him to it or not.

There is an advantage in breaking from one error that fetters even to another that frees. When our Association was founded, tradition no longer had the hold upon students of economics that it had when the words of John Stuart Mill were nearly final. There were signs of a disposition to break fetters and no one did this more frequently and boldly than did Professor Patten. With him nothing was too sacred to be questioned, and, if a perpetual search for truth is more important than complete and final knowledge, he rendered nearly the maximum of possible service to those that were fortunate enough to sit at his feet. They have to thank their inspiring teacher for awakening in them the impulse of the pathfinder and discoverer. Much new truth and a large measure of that spirit that eagerly searches for it are his bequest to the young men of America.

SIMON NELSON PATTEN—AN APPRECIATION

By Franklin H. Giddings

If paradox is a relativism that, like Hiawatha's mittens, puts

"Skin-side inside, inside skin-side"

and everything up-side down-side, Simon Nelson Patten was our great philosopher of paradox; and if, as Kipling has more than intimated, the American spirit is paradox alive and creative, Patten was one of the best Americans we have yet produced. Nevertheless, to say this without saying more would be to miss the truth while telling it. There was a logic in Patten's method, and just as musical genius can evoke

strange harmonies from clashing discords, he could reveal truth by weird syntheses of contradicting syllogisms. Passing swiftly from one absorbing interest to another, and, in his own judgment of himself, abandoning one after another contention into which he had thrown his best energies, he did not in fact do anything of the sort. His deviations were but tackings of the ship with intellectual tide and weather, on a consistent course. Whether he was himself aware of it or not (and I doubt if he was), his thinking from first to last was an application of William James's famous experiment with the frog that could have escaped from beneath the bowl inverted in the tub of water, by diving under the edge. By methods of indirection, discovered by trial and error, the human mind can achieve all things. This was Patten's assumption and his prophecy, in all his teaching and in every book that he wrote. It was an inspiring teaching, and in that fact lay the secret of his influence.

By alternatives and substitutions in consumption, the determination of rent, the point at which diminishing return begins, the ratio of food to population, and the expediency of free trade may all be altered. Such was the thesis of his brilliant and startling first book, *The Premises of Political Economy*. In *The Economic Basis of Protection* and in the *Theory of Dynamic Economics* he developed and expounded it in point of detail as applied to tariff policy and to general theory. In *The Theory of Social Forces* he ably argued that the development of a social nature antagonistic to conflict and potential for coöperation and happiness turns upon a growing appreciation of inexclusive pleasures, through which, with favorable reactions of coöperation and the substitution of knowledge for ignorance, a pleasure economy supersedes a pain economy. These ideas are further exploited in *The Development of English Thought*, and *The Theory of Prosperity*. In *The Development of English Thought* attention is called to extensive maladjustments of human beings to their environment arising in modern times from rapid environmental changes impinging upon the character, which alters slowly or not at all, and the imperative necessity, therefore, of intelligent readjustments. This contingency is further considered, somewhat speculatively and, unfortunately, with inadequate mastery of biology, in *Heredity and Social Progress*. In *The New Basis of Civilization* we find all of these considerations vividly restated and brought to bear upon a program of practical endeavor.

The seer and the man of science have now and then been united in one individual, but not often. Patten did not "check up" his visions. Verification did not interest him, and at times he seemed to betray something approaching scorn for inductive methods. The idea of turning Hiawatha's mittens back to skin-side outside to see what the beaver looked like in life, would have amused him. If ever the question

crossed his mind, What would happen if the frog never did dive under the edge of the bowl? he dismissed it. Therefore he never concerned himself with the further question, which by most of us is felt to be of practical moment, What ought we to advise and do in parlous days before the millenium arrives? If American manhood refuses to be corn-fed instead of wheat-fed, and American womanhood refuses to take ginghams for silk, shall we nevertheless build higher our walls of protection? If inexclusive pleasures are not preferred to limousines, shall we therefore shut our eyes to the struggle for oil, and scrap our cruisers? Unconcern with actuality made Patten oblivious, also, to theoretical implications which not many of us are able to shut out. If the world has not encountered diminishing returns, why our furious drive to discover and invent, and to organize efficiency, and why the substitutions in consumption that we are, in fact, trying out? If the tendency of population to overtake the production of food is only a bugaboo, why are the educated classes and the more intellectual peoples deliberately cutting their birth-rate?

I cannot help thinking it unfortunate that Patten never faced these facts and questions. It gave, I fear, a wrong direction to his influence. More than two or three of his most thoughtful contemporaries, mentally adjusted to the world of fact and probability, were unable to see his world of possibility, and undervalued his contribution; while the "Do It With Thought" redeemers, armed now with the magic formula "Say It With Language" will go forth throughout the world repeating, "Day by Day, in Every Way, My Surplus Gets Bigger and Bigger."

And yet, throughout the years of that close friendship which it was my privilege to share with him I often asked myself, and I ask again now that he is gone, whether it was not just that strange combination of vision and myopia, of power and limitation, which made Patten the great teacher that he was, the stimulating comrade that we all felt him to be, the friend who not only gave us love but also made us fence with him, discovering our vulnerable points. Many times I said to him everything that I have said here, and more, and the only answer I ever got was that curious, weary smile which perhaps was his most characteristic self-expression. Always happy in company, he yet moved among us as one detached, an obviously lonely man. In solitudes of his own seeking, and Spartan in his way of life, he reflected on how a complex and speeding civilization could further complicate itself, and make itself move faster.

S. N. PATTEN

By J. P. Lichtenberger

It is difficult to speak dispassionately and to place in proper perspective the work of a man with whom one has enjoyed intimate association through many years, when every thought of him stirs the emotions and calls up memories one delights to cherish.

We honor today the memory of a great scholar and teacher, but great as these qualities were, in the minds of those of us who knew him best in the intimacy of his private life, they never overshadowed the generosity of his nature nor the kindliness of his soul—qualities which stamped him as one of those great personalities who leaves the world poorer in his death. The vigor and originality of his thinking was matched by an elemental human sympathy and an unfeigned faith in his fellow-men that made him one of the kindest men I ever knew. He contended earnestly for the faith that was in him, but he harbored no grudge against those who differed with his views. He was without malice or envy and he knew no guile. Hard pressed in controversy, he remained confident and calm. Never did he resort to that specious form of argument which consists in impugning the motives of adversaries. He took great comfort in the consciousness that he had contributed to saner thinking and to clearer views, but he derived equal satisfaction from like achievements of his friends. He was as sensitive as a woman and he suffered in adversity, but his disposition remained sweet and his mind serene to the end of his days.

Dr. Patten's breadth of mind and his inclusive interests gave to him a cosmopolitan character which eluded classification in any orthodox category.

Sociologists have never quite been willing to concede to the economists any exclusive claim to him nor any monopoly of his influence. His thought overflowed the boundaries of economics even when most liberally defined.

It is true that he repudiated the name sociologist so often applied to him and insisted that he was an economist, yet no one more persistently and intentionally disregarded what he considered the artificial delimitations of the several fields of social science. He followed the logic of his ideas wherever it led him. His greatest book, or at least the greatest course he ever gave in the University of Pennsylvania, *The Development of English Thought*, was scarcely more an economic than it was a sociological interpretation. Few would insist that his *Theory of Social Forces*, his *New Basis of Civilization*, and his *Social Basis of Religion* were purely or even chiefly economic works.

In at least three respects, sociology, either in its pure or its applied aspects, is indebted to Professor Patten. Of these I shall speak briefly.

In each his ideas were rooted in his own subject but they overgrew these limits and their applications were distinctly social.

1. Among his broad generalizations, many of which he modified or recast from time to time as his thought developed and matured, there is one which in its final form withstood the test of his own searching criticism, and which has found a place in the literature of sociology as a permanent contribution to the theory of human progress. I refer to his theory of the Pain and Pleasure Economy.

Herbert Spencer in his *Social Statics* had shown the modifiability of human nature in its reaction to environment; that man needed one constitution to fit him to survive as a savage but quite another to adapt him to civilized life; and that between human nature and developing society a definite coadaptation must invariably be maintained. The specific incidents of this process, however, he did not develop.

Siezing upon his concept, Professor Patten elaborated it with clearness and precision by introducing the factor of economic determinism. For ages mankind struggled against a condition of economic deficit, which he labeled a "pain economy." In deadly competition for food, room, and safety, and surrounded by savage beasts and savage men, he evolved a psychology of fear and a behavior of the motor-emotional type. He could survive only through the development of ideas, ideals, and impulses which led to individual and to group security. Negative virtues, supernatural religions, and militant governments were resultant types of thought and of social organization.

Growth in population, improved social life, and increased knowledge combined to thrust mankind somewhat suddenly, in the modern age, into a condition of economic surplus, or "a pleasure economy." In this state new requisites for survival are demanded. But human nature changes slowly. Men pass to the new order with an intellectual-emotional equipment created under a pain economy which is only partly reconditioned and hence ill-adapted to present requirements. Modern civilization has been for a long time in this transition. Individuals and nations have gone down in the struggle without ever having developed ideas, ideals, and impulses which enable them to resist the new form of enemies which are now internal. Positive virtues, vital religion, and ability to form and to maintain voluntary types of coöperative society are the tests which the new conditions impose, and these require time to develop.

This transition period is accompanied by mental conflicts, moral contradictions, and social catastrophies. It is a time of danger and distress. But progress always involves costs. The ideal commonwealth, however, is the goal toward which evolving civilization moves even if at times the progress seems provokingly slow.

2. One of the most significant achievements of Professor Patten,

aside from his theoretical work, was in connection with the building up of the curriculum of the Wharton School of Finance and Commerce in the University of Pennsylvania, the pioneer institution in the field of business education.

At the time this school was founded classical economics still held the centre of attention. It had scarcely been perceived by most economists that the future development of the science lay, for the time being, quite largely in the direction of specialization in its more practical aspects and in the growth of concrete studies in the fields of finance, industry, transportation, labor, insurance, and the like. With prophetic vision Dr. Patten discerned this trend and threw the weight of his influence into the movement, more, however, to stimulate and guide than to construct. His method was to aid in bringing to the school, or to train within the school, capable young men, and then by every means available to encourage them to create courses and texts in these as yet little explored subjects. In this way an interest was aroused and a literature was developed which gave to economics a wider range and an increased practical value.

But this was not all. He saw likewise the necessity of correlating economics with other social sciences if such a course were to lead to a broad training and to a constructive citizenship. Consequently he gave to political science and to sociology the same recognition and importance which he assigned to his own subject. The result is that the Wharton School today represents in its curriculum not only a most complete development of economics in the larger sense, but it is far less a technical school of business than a school of the social sciences. In this respect it stands unique among the schools of its kind, and in this the genius of Professor Patten is clearly manifested.

3. As a teacher Dr. Patten possessed peculiar worth. He was not a factmonger, though his knowledge might almost have been called encyclopedic. His chief business as a teacher was to make his students think, and in this extraordinarily difficulty task he possessed consummate skill. Some have thought that his teaching and writing displayed a strain after the novel. It is better to say, I think, that it was rather the unconventionality and originality of his thinking that created such an impression. He saw things differently and he described them uniquely. It was this quality that disturbed the complacency of his students, and that gave to thinking a kinetic quality which made it not only a pleasurable but a useful occupation.

Striking as this characteristic was I still cannot regard it as the most distinctive thing in his teaching. There was something almost uncanny about the way he gripped his students and impressed his personality upon them, and it is here we come upon his peculiar contribution to what commonly is called applied sociology. His students

went out from his classroom imbued not only with a love of knowledge but with a love of their fellowmen and with a will to service; and this, not in the field of business, in which their training under an economist might have fitted them, but in some specialized form of social work. With the possible exception of the late Charles R. Henderson, whose interest was distinctly in this field, I think it is safe to say that no teacher of his generation has had so wide a following in social service; that there is no one whose students fill so many responsible positions in social work throughout the length and breadth of the land. This I regard as one of the most remarkable features of his influence.

Speaking personally and for the intimate circle of his closest friends, I cannot forbear to say that we miss his ungainly figure and his genial, kindly, homely face in his familiar haunts.

It is hard to realize that he is gone: he was so much a part of us. But we console ourselves with the assurance that he has left to us a rich legacy of thought and of inspiration to serve which will continue to enrich our lives as the years pass.

SOME FORMATIVE INFLUENCES IN THE LIFE OF SIMON NELSON PATTEN

By Rexford G. Tugwell

1. *The riddle of his personality.*

Patten's heredity and his breeding were quite logical antecedents of the philosopher and economist he became in later years. The whole of his career in all its many phases is understandable in the sense that it has discoverable causations and traceable developments, known to his students; and yet there is a remnant of mist, difficult to penetrate, clinging about the riddle of his personality. Everyone who has studied the man and his work has seemed to become a little bewildered in the attempt to feel out the spreading roots of his strength and to analyze a soil that could nourish so complex and perverse a genius. I suppose the precise junction of men and events must always furnish this irrevealable mystery, growing more and more difficult of solution as the personality that was the living man withdraws into the shadows of time and death and as gradually there comes to be left only his work—the stiff and formal emanation of a mind that once possessed the power to stir with its warmth and radiance the minds of other men. Of no one was this ever more true than of Patten. His was a brilliant personality; the work that remains is turgid and clouded with inhibition. His hand could never hold a pen so well as it could hold a plough handle and words came into his mouth that could never find their way to paper.

It may be admitted that the times create their men and that men

cannot much affect, in their own day, a world that rejects them. The times created Patten, strangely enough, out of season, just as they once created Socrates and again at one time or another, Galileo, Roger Bacon, and Mendel. The world seems almost certainly fated to reject the genius that might save it. And yet it must have been true that the elements that stirred the minds of these men were present in the same world that rejected them. This paradox of history is one of its most curious aspects; and in dealing with the life of Patten we can remember that even while we fumble for the explanatory materials in his life—the causative elements in his ancestry and his environment—we are at the same time dealing with forces that were generated by the world we live in but which for the most part are still not accepted by it. Nor, probably, will they be for many years, if at all.

The times create their inventions, their movements, their philosophies; but not the times we all of us know, for the great mind is selective and abstracts from the mass of phenomena that confuse the rest of us, the elements that are significant for the future, and builds with them, quietly, in the scholar's way, for the generations yet unborn. And so, although we admit the force of circumstance, yet it ought not to blind us to the thought that inventions, movements, philosophies are created in the minds of men and that their nature must depend in great degree upon the human intelligences in which they gestated, which gave them form and life, and presented them, perhaps, to a cold and unresponsive world.

After all, men are important if they conceive and bear ideas; and for this reason as well as on account of my personal regard for him it has seemed to me worth while to try to form a picture of the ancestry and the development of this man that would, perhaps, in future, lessen the difficulty men may have in finding out the influences that bear upon his work, if that should be a problem then.

2. *Why did he have the kind of nature he had?*

He was an uncouth and primitive man; but filled with a kindliness toward all men. There was no room in him for malice and he was charitable to everyone; but this did not affect his rough manners. Forty years of Philadelphia and a German education left him remarkably unchanged from the farm boy of the seventies. His remarkable persistence in ways of life, of habits of thought, and of personal manners, display to the discerning the fact that his real life was not in these things; but in the things of the spirit and of the intelligence. He could not discriminate between a good and a bad picture or poem or piece of music; nor between fashionable clothing and what was not fashionable; nor between good manners and bad manners; but he knew when straight thinking was being done; and he possessed an uncanny

power of discriminating between what was permanent and significant in social science—or, for that matter, in natural science—or in philosophy and what was specious and transient. This made him a great prophet but a poor leader; a great teacher but a poor administrator; a great scientist but a poor expositor; a great friend but a poor enemy. All this needs to be accounted for.

In general the explanation lies in the racial stock from which he came and the environment in which he lived his early years. Men who did not know his racial history nor the conditions which formed him never knew Patten and were always baffled by him. It was assumed too easily that he ought to be intelligible in his Philadelphia—University of Pennsylvania—setting; but in reality he was a stranger and an alien there, and so became a mystery.

His ancestry was Scotch, with just a tincture of Irish. Some of his forebears came over in the "Mayflower" in 1620, some in the "Ann" in 1623, and all of them had been several generations in America. It was the stock that transported New England and all that New England stood for into the West. It carried the dissident strain of the Pilgrims, the hardness of the Scotch, and the perverseness of the Irish. It sufficed to conquer a continent and to create a civilization. It carried ability too, the kind of ability that stands in a wilderness and has the effrontery to say: "Here will I build" and that goes through with it, clearing the land, breaking it to the plough, sowing and reaping; building a rude shelter, then, finally, a home and barns; rearing children in the fear of God and the belief in the natural independence of man from every other force. The children of such a race have to mature early because they have to work with their hands; and Patten, we know, was six feet, two inches in height, at the age of fourteen years; they have to have big hands and feet to follow a plough all day and to master its share, and Patten's hands and feet were great to the point of uncouthness in a University classroom; they have to have toughness of fiber and a native ability for adjustment, and Patten lived all his life unchanged from his coming to first maturity, his ability for adjustment being turned, when it was called upon, to the problems of social adjustment—intricate problems for a farmer, and difficult to master but he came through successfully by sheer force of will.

Then too the men of such a race have to have a sense of justice for they are in a homestead world; and Patten had that sense of fairness to a very great degree and it carried over into an overflowing benevolence toward all humanity. They have to have a guard on their lips and a mastery of self for there are otherwise no restraints; and all these Patten had too, almost to excess.

He was in all things a typical man of his race. The material out of which he was formed was the material of which America is made; but

it was the best of it. That ability which could and did create homesteads from the wilderness of New England, of New York, of Illinois, of Iowa, and of Colorado, as successive generations repeated the history of their ancestors, was also capable when the need arose of displaying itself in quite different directions, and so we find in the maternal ancestry of Patten a Justice of the Supreme Court of the United States and two Judges of the New York Supreme Court. It was a rich, distinctive heritage that came down to him; but it was a heritage that carried the whole of its implications into whatever life its sons elected. Patten, the Professor, could not be other than a United Presbyterian; he could not wear other than clod-like shoes; he could not find a release in sports or amusement nor banish the "barnyard accent" from his speech. He was fully and completely the child of his race.

But also he was the child of his time. For the prepared clay which he presented to the natural forces of a frontier Illinois farm from 1852, when he was born, until 1888, when he finally left it, was shaped and moulded by its winds and snows, by its suns and showers, by its labors and its leisure, by its customs and its inner life. He worked in the fields and in the stables; he bent himself to the scythe and the cradle, he tested in his hands the hickory shaft of the pitchfork. The fields of his father's homestead were sprinkled with his sweat. The smell of hay in the loft and of milk in the pail entered into his soul through his boy's senses. There were 500 acres in that farm and there were cows and horses and hogs to match; and the grain crops in the barns in winter ran into the many thousands of bushels. Men tended those animals and built those barns and housed those crops. Patten was one of the men, and this was the Patten who was a mystery in Philadelphia.

3. *Why did he go to Germany to study?*

For the first years of his life Patten went to the country school near Sandwich; then when he was seventeen he went up to Aurora, twenty miles away.[1] Jennings Seminary was there—a locally celebrated institution. Here he came into contact with two persons who had a considerable influence in his life. One of these was George W. Quereau, the principal of the Seminary; the other was Joseph French Johnson, then a student like himself. Quereau was a philosopher and it was he who interested Patten in the study of philosophy, enraging him by his dilettante use of his dialectical powers, but nevertheless introducing him to philosophy. "Joe" Johnson, on the other hand, furnished the first intelligent companionship, outside his own family circle, that had ever come into his life. He was very unlike Patten. He had an urban manner; he was popular among the girls; he was a leader

[1]For a more detailed study of the life of Patten, especially before he became a professor at the University of Pennsylvania, see the Author's "Notes on the Life and Work of Simon Nelson Patten" in *Jour. of Pol. Econ.*, April, 1923.

among the boys; and he was addicted, like the normal youth he was, to the pleasures of the late teens. Patten had little use for pleasures; he lived in the future; he was an idealist. These two, otherwise so unlike, were able, however, to develop a firm and fruitful friendship upon the basis of common intelligence. This tie grew very strong—stronger in Patten than in Johnson, for Patten made few friends and had little in common with those he did make even in those days. Their Seminary course went its way and both graduated in due course. Patten then went back to the farm for a year. Farm boys being educated often do that kind of thing. Then in the fall of 1875 he went up to Evanston to be a Freshman at Northwestern University.

He was lonely there with that nostalgic homesickness that only Freshmen know who are torn up physically and mentally from their roots and to whom the new soil has not yet given vitality. In the midst of this loneliness, aggravated by his natural aloofness and his withdrawal from much of the life around him, there came letters from Halle. "Joe" Johnson had finally settled there, and with a friend of his, Edmund James, whom Patten had never yet seen but who was to be his second great friend, was enjoying the German atmosphere. The call of friendship was strong to the lonely youth and, to add to it, Johnson wrote enthusiastically of a certain Professor Conrad who charmed his American students. He wrote too of German philosophy, for the Germans took their philosophy seriously; and it could not be said that the Freshmen at Northwestern took much of anything seriously. The upshot of the whole situation was that he finally obtained his father's consent and set out for Germany, for Halle, for "Joe" Johnson, before the end of his first semester at Evanston.

4. *Why did he become a philosopher-economist?*

This is a difficult question to answer. It is easy to see that the man his later students knew in the Philadelphia of 1910 to 1920 was pretty much the unchanged product of the years before 1875 when his life was that of his farmer forebears. A slight reconstruction of his early experience and a meager knowledge of his ancestry makes that much clear; but the accounting for his processes of thought is not so easy. Yet there are antecedents that are plainly significant here too, although we shall never have enough understanding of the minute conditions that shaped his thought to say certainly that we have all the keys to his personality. Little things are often so significant; and after years have passed they are impossible to uncover save by the merest chance. How many men's lives have been fundamentally influenced by a chance conversation, by some overheard talk, by the sweet pleading of a boyhood sweetheart, by the casually given advice of an unrealizing hero; how many have found a splendid significance in some biography

that appealed to an undisciplined imagination, perhaps a biography of a life lived in a very special way that suddenly seems attractive though it never had seemed so before? The environment of men is so much more complex and the significant elements so much more hidden from casual eyes than we generally assume in trying to account for men's actions, that one must approach such a problem in a very humble frame of mind.

But young Simon Patten was made of tough moral stuff and, after all, moved in a straight line from Sandwich to Brown's Mills-in-the-pines.[2] For instance, it has already been said that he was Scotch, and this goes a long way toward explaining his philosophical and moralistic bent, as any one can testify who knows the close sect of United Presbyterians. He was of the same piece as Scotch preachers are made; he was an economic Calvinist. This may seem strange doctrine to those who saw in him only the liberating forces and his overflowing benevolence toward all mankind, but such a person would be forgetting the self-discipline of the man that amounted to nothing less than immolation, the inherent inability to find any touch with the lightness and the fineness of life, and the moralistic strain that rose to Jeremiads when occasion demanded, and runs persistent, otherwise, through every page he ever wrote and every phrase he ever spoke. He never for an instant forgot that he was sent to save the world, though his own sufferings had cleared his eyes of those other Scotch dogmas that all is vanity and that sin is the heritage of man. Like Adam Smith and David Hume he was a moral philosopher; but, living in the age he lived in, he worked in the field of industrialism, for it is through the forces of the industrial life that man must find his salvation—such at least was his conception; and from his German days he set himself to a task from which he never flinched in pain, in sorrow, in frustration, or in defeat; and all these were conspicuous in his life.

Lincoln himself carried no greater burden; nor, at the last, did he feel the weight of war more than Patten. One might work out an analogy here. They were both out of Illinois; both of huge frame and of noble head; both carried the world within their hearts and tasted the bitter cup of its anguish. The resemblance was thus remarkable physically; but even more remarkable spiritually, with the one exception that Lincoln had a saving escape into humor; Patten had none.

The tendency toward moralism was confirmed by the religious teaching of his early youth, though very early he began to see through the moral pretensions of United Presbyterian theology. But he never forsook the church, and this is characteristic of his persistence. It was his way to work inside and he never dropped his formal church affilia-

[2]The medical institution where he was taken during has last sickness, and where he died, was at Brown's Mills, New Jersey.

tion; but neither did he ever drop his efforts to reform its Calvinistic doctrine. It was such tasks as this that he was always setting himself and never giving up and that led straight to frustration and an inner bitterness which he hid away and never even in his weakest hour disclosed.

In his adolescent years, however, he lived among the greatest changes of a thousand years. He swung the scythe, but lived to see the mower; he cradled wheat, but lived to see the reaper and the thresher. He saw land broken to the plow and saw it conceive and bear great loads of cereal richness that went out to all the world in a growing stream. He saw the railroad come. He saw the nation shake itself out of war and turn to the arts of peace; he saw the deep wounds heal and love grow into the place of hate. These were the phases of the outer world in which he lived; but also closer to him, all around him were the things of the new age. Into the green-shuttered house, new-built in '56, there came a stream of newspapers and magazines and books; his father went up to the legislature and brought home tales of a wider life. He fished with his brothers and cousins; but above all he worked. His feet pressed the earth, his body hardened to the tools of farmer life, his eyes opened to fecund fields and the moving sight of cows in a meadow pasture. If he had lived in Scotland he might have thought the classicists were as right as Alfred Marshall conceives them to be. But he lived in Illinois where nature was generous and where people were scarce and food was plenty; and never all his life could he be persuaded that misery and poverty were the natural heritage of man and that he subsisted by the uncertain tolerance of a hostile nature which, sooner or later, would nonchalantly snuff him out and clear away the accumulated debris of his works.

He was clearly out to save mankind; so much was determined by his nature and by the hearsay of the poverty in the cities of spreading industrialism. But he believed it might be accomplished by doing first things first and letting human nature accommodate itself to a generous nature. He did not arrive at all this in his boyhood. He grew into it all his life; but the development moved in an undeviating line. He was sickened of dialectics under Quereau at Jennings Seminary; he found a breath of air at Halle under Conrad; and it was there among the thrifty Germans that his faith was strengthened in the way of salvation he had already glimpsed. He began to conceive of man and his intelligence as the multiplying factor, and of nature as essentially a passive force in spite of her dynamic aspects. Man had only to understand in order to multiply. But first man had to move parallel with a changing nature and in a comparable tempo. In order to do this he must master himself as well as come to an understanding of the determinants of nature, whatever they may be. It was in the slow process of

developing this grand thesis, so different from the English philosophy of his century that won the American scholars of his generation, that he came finally, after his study of nature (that is to say economics), to see that *human* nature is the stubborn factor. It simply refused to multiply nature; in fact it seemed sometimes bent on a conscious program of self-destruction or, at the least, of retrogression. The first thing to be done, therefore, was to attain an understanding of human nature in the interest of making it also the servant of progress. The last years of his life were given over almost entirely to a self-imposed task of clearing away the confusion that hides the possibilities of his intelligence from man himself and freeing human nature for its part in the history of mankind.

In all this he was the child of his race and the child of his time. That much seems clear. But why it was that he came to each of the elements in his progression when he did and as he did, I, at least, cannot say. It is here that the final mystery refuses to be pushed back. Other men lived through those years in the Middle West and went to Germany to study— many of them became economists too—and yet came home to rewrite in their books the classical English economics that grew up before the doctrines of evolution had shed their light upon the history of thought or that, if they had reached out for the significance of evolutionary philosophy, had not been able to see around or over the doctrine of natural selection and the struggle for existence. American economics has been formed for the most part upon the assumption that the struggle for existence explains progress. This is because that was the overwhelming generalization of the nineteenth century. It needed a mind as great as Darwin's to see around it. Patten had that mind. But he could make no headway. He lacked a Huxley and a Spencer, a Clark and a Giddings. It was the most costly error in all history, Patten thought; and coming when it did, one cannot be sure that he was wrong. Competition, *laissez-faire*, exploitation, and poverty are the conspicuous features of the nineteenth century that begin to stand out now contrasted with the *possibilities* of progress in the splendid fecundities of the new West and the inconceivable potentialities of the new machinery of industrialism.

The persistence of the Scotch, the unassailable independence of the homestead proprietor, the moral enthusiasm of the United Presbyterian, the self-discipline of the Puritan, and a touch of the perverseness of the Irish—all these were in him. A less subtle mixture, a less firm training, might have yielded more common results. One can only say that in him the elements were so mixed, the permutations so conjoined that there was no more doubt of his greatness wherever he went in the world than there is question of the aspect of a mountain

whose granite shoulders and whose head among the clouds dominate the country round about.

Several concrete factors, then, led to his becoming a philosophical economist. There was the accident of finding Conrad, following the series of accidents that led up to it; that was the fact that, being an inductivist, and admitting the test of fact, most of the relevant facts of life were to be found in the industrial world. The essential difference between Patten's kind of thinking and the kind that might be expected to develop out of United Presbyterian training, was that the one did admit the test of eventuation and that the other did not. His mind was of quite as deductive a habit as any man's could have been; it subsisted on insight, on flashes of perception, on the illumination of brilliant leaps of the imagination; but it agreed that the vision was faulty when the insight was shown to be insubstantial and the vision partial or wrong. It did not fall back on a higher authority. Of course, it did insist that the facts should be exactly relevant, and this irritated many a critic; for facts that seemed to destroy his position left him unmoved and in the possession of the same opinion as before, content to weather the storm of criticism until time should unfold the truth. And exasperatingly often he came through unscathed. He had an uncanny power of selecting the really relevant phenomena out of a mixed mass of apparently motivant forces, of isolating and studying them, and of charting their portent.

Then, for the reason why he became formally an economist, it is only necessary to remember that it was just in these years that economics (or, rather, Political Economy then) was just emerging from *Mater Philosophia* as an individual science. In this case, as in all others, "philosophy was the literary anticipation of science" and Patten came along just as the emergence from the chrysalis took place. The Edmund James whom he had met at Halle, when he went there at the call of "Joe" Johnson, found a place at the University of Pennsylvania when he had finished at Halle. Patten, with his lack of manners, his rough culture, failed to find a place and had to go back to the farm for the lack of something better. There appeared to be nothing for it in the end but to start all over at the law and this he finally decided to do, going up to Chicago to law school. But there his eyes failed and he could not go on. There followed years of anguish; but in the darkness of the milkhouse and the haylofts there was born what afterward became the *Premises of Political Economy* for which James found a publisher, and which won for him at long last—in 1888—a professorship in Political Economy at the University of Pennsylvania. He thus came to be a full-fledged economist. But he nevertheless remained a moral philosopher in the strictest sense of the word.

5. *Where did the main generalizations of his philosophy originate?*

These might be summarized briefly as:

a) A belief in prosperity and the possibility of progress; and a contrast of past times with the present as an age of deficit and pain contrasted with an age of surplus and pleasure.

b) A belief that economics ought to develop more fully the fields of consumption and production rather than that of distribution (which is not accomplished by the operation of natural law as has been assumed, but by the diffusion of a single surplus fund to the most powerful social forces of the moment).[3]

c) A belief in the power of the intelligence of man to multiply nature indefinitely.

d) A belief in the power of human nature to successfully carry through the co-adaptive process which will make for better and more flexible adjustment between men and institutions.[4]

His belief in prosperity was clearly the product of his Illinois experience in an expanding age—an age of the first real application of machinery to agricultural production, which literally flooded the markets of the world with raw materials. His study of history and his experience on the Continent brought home to him, however, the facts of a different life. He had a chance there to see a civilization built on a more intensive agriculture. Thus he saw the contrast of old and new; and yet even here the possibilities of progress were just being discovered. Conrad was a leader in the new movement and Patten saw it at work. The Germans could not depend upon opening up new fields, on breaking new land to the plough; a subtler method had to be found. An instance of the way it was found is to be seen in the progressive change in the starch content of the German potato by governmental supervision of seed distribution. And this is only an illustration. Patten never saw any cause to suppose that progress might not continue indefinitely and that the deficit of all peoples might not be wiped out. This, he felt, would bring about a change in philosophy and in aims of life everywhere. He proposed to work from the new assumptions; and he did.

Distribution seemed to Patten a singularly unfruitful field as it had been developed by the economists, because it led nowhere but to the justification of present arrangements, or, at the best, to a division of society's surplus on an impossible basis—that is to say, out of nonexistent funds.[5] There is no use of talking about the same kind of funds in the United States and in England, much less the England of half a century ago, he thought. The old theorists said that the source

[3] The student of Patten's economic theory will be able to trace these theses of his further in the forthcoming volume of his *Essays in Economic Theory* to be published by Alfred A. Knoff, New York.

[4] So far this large body of Patten's work on Economic Psychology remains uncollected in many scattered periodical articles.

[5] *Reconstruction in Economic Theory.*

of capital was savings and that all our capital must come from those who reduce their expenditures below their annual incomes. But Patten differed with this. He said that capital comes from *individual* profits in new industries. From this one fund expansion takes place. The real struggle in society now is not between classes, as the English economists said and as Marx insisted, but between two forms of industry—industries which exploit some general advantage, in which case the surplus is profit, and industries which exploit some local advantage, in which case the surplus is rent. But in any case there is one source for the incomes of wage-earners and managers or owners alike. What each of these groups gets and what the individuals get is determined by relative advantages—monopoly power.

Struggle over irrelevant issues will not change this distribution process. The thing to do is to strengthen the weaker class, the workers, by any and all means—education, social work, philanthropy, magnanimous treatment.[6] This will have the result of increasing the surplus, of ensuring its proper distribution and also its proper use. More attention ought to be paid to modes of use,[7] because, by intelligent use, the social struggle can be turned to real issues and away from futile ones, and the surplus to be shared can be greatly increased.

Partly, so original and independent an approach to the theories of industry is due to Patten's general orientation in opposition to English misery-economics, partly to the fact that he was never, in his formative years, in contact with the poverty of the industrial centres, and partly to the fact that he had seen thrift at work in Germany, in the true sense—that is, making the best of what exists and taking immediate advantage of each gain that man makes upon nature. To contrast with this there was the richness of Illinois and the prodigality in use of Americans. The resources of the United States joined with the wisdom in use of the Germans would forever assure a prosperous nation. But the nation must not be torn by useless struggle. It must deliberately strengthen the weak and raise all the levels of life.

His belief in the power of man to multiply nature indefinitely by the application of his intelligence goes back to a number of sources. In the first place, it must be remembered that he had seen five hundred acres cut out of the prairie and made fruitful. Then he had seen man's intelligence make the mower, the reaper and binder, the thresher and the locomotive, and had seen the effects of these in use. Also he had seen the results that could be obtained by guiding seed distribution, pest control, and fertilization in Germany, as well as what it meant to make wise use of nature's provisions. It is no wonder that a man with his strong frame, unvaried health, and his striding mind

[6] *The New Basis of Civilization.*
[7] *The Theory of Consumption.*

should have believed in man's power, especially when he had lived his early years with such a father as Patten's and then had come through the experiences of the seventies and eighties in the Middle West.

It was the summation of all these influences that confirmed and strengthened his belief in the power of man successfully to carry through his adjustment problem. This he conceived to be a co-adaptive process. But human nature is more flexible than institutions. Institutions are as they are at any given time—in Veblen's phrase, the "state of the industrial arts" is as much a part of the economic environment as any other part of nature, and probably of more immediate importance to man, because the industrial arts furnish the actual surroundings and instruments of life to which he must react. The more flexible factor must be human nature. Man can shape his factories to himself and his cities and his homes as he has shaped his clothes; but obviously there are limits. A seaport has to be on the coast; industries have to be built up at sea level, the junction of iron and coal locates, definitely, the steel industry; and corn cannot grow in Montana. And so human nature has to make adjustments when intelligence fails to give the relief needed by changes in the environment. Patten lived in a time when there was a belief that human nature was inflexible; that the world must be changed to suit it. And this was strengthened in the twentieth century by the McDougall school and later by the Freudian school of psychologists. It was carried over into social psychology and a whole program of radical-liberalism[8] built up from it as a premise. But Patten never concurred in this view of human nature. He conceived of the intelligence of a man having just as much power over *human* nature as it had over *material* nature —such things as cities, factories, and homes. There were certain inflexibles in this case just as in the case of the seaport that must be on the coast. But they were not serious enough so that it had to be assumed that man had no control over his desires, his passions, his motives, his incentives—what you will. It was a co-adaptive process, the adjustment of a man and his surroundings; and human intelligence was the active factor, remaking the world, remaking man himself, bringing order out of chaos, setting his feet upon the upward path and rescuing him from the cul-de-sacs of regression. Patten turned, for this reason, to the study of human nature for substantiation when he conceived that the work in economics had reached a sufficiently advanced stage.[9] The work he did here was monumental and prophetically right. More and more the science whose field he invaded moves toward his point of view. But no one else has had the insight and the great-

[8] See "The Failure of Liberal Idealism," *The Freeman*, July 14 and 20, 1920.

[9] For a complete bibliography of Patten's work see the forthcoming Patten Memorial volume to be issued as a Supplement to the *Annals* of the *Amer. Acad. of Pol. and Soc. Science*.

ness to synthesize the two processes and carry the work farther. This is, as he saw, one of the most fruitful of future fields for quantitive measurement; but we have not yet arrived at it.

The founding of the Wharton School and his immense interest in the development of quantitative measurement in every economic field was due to his early insight into the nature of the co-adaptive process of social forces. Men who *knew* were needed, quantities of them were needed. This was the *raison d'etre* for the Wharton School. Nature must be fitted to man. His later work was not understood by his Wharton School followers who saw his earlier purpose well enough, partly, at least, because he could not make them see or believe that human nature may be moulded by man's intelligence too; and that, as a matter of fact, it must be. His work was but half completed when the country's universities had almost unanimously gone over to the policy of training industrial experts in Schools of Industrial Administration. But with that accomplished, he was free to turn to the other half of the problem; and he did so. The Scotch preacher turned at the last from working with the material things of life, trying, with true Scotch persistence and thoroughness, to increase the material welfare of his parishioners so that they, in their prosperity, might have time to give to the things of the spirit, to the salvation of man's soul through the changing of his nature from what it is to what it seems desirable that it should be. His book, *Mud Hollow*, was the culmination of this effort; but meanwhile there was an unpublished drama and there was the group of songs over which he nearly broke his heart—he called them *Advent Songs*. They were the attempt to use the old tunes around which the emotions of men cling, with new words which express the coming of the new day instead of looking backward toward a tragic past.

He was a salvationist always and worked with whatever materials presented themselves, but preferably old ones which men had come to love. Novelty had no attraction for him, nor did he ever mistakenly conclude that men would follow after the novel. He knew well how they cleave to custom and convention. But, into the old forms he tried to infuse the new spirit. The adjustment that must be made must not violate sentiment, he said, but must come about because of it.[10] He was traditional; but he was revolutionary. And was this not just what his ancestors had been? They did new jobs with old tools; they broke into wildernesses, but they kept their old God; and they built their new homes in the image of the old, but the homes were nevertheless new and built upon the fecundity of new forces. Patten never left the tradition of his fathers.

[10] *Product and Climax* and *The Social Basis of Religion.*

SIMON N. PATTEN—TEACHER

By C. H. Crennan

The gift of words is not in me to bear fitting testimony to the greatness of the best friend I ever had. Dr. Patten was more than my friend. He was guide and counselor and the greatest source of inspiration. It is not strange, then, that I should hesitate to offer an appraisal of his work. But, as a member of that coterie sometimes called "Patten men," I am under command.

It is not my hope to be able to tell of the many traits that endeared Dr. Patten to all Patten men. The instances of his generosity, tolerance, and loyalty are too numerous and personal to be recited. He gave without thought of himself or suggestion of payment. He asked only that we, in our turn, try to do something for the younger fellows coming on. Fearlessly independent, Dr. Patten led and we followed. Even his eccentricities and that curious streak of "orneriness"—which, incidentally, is common to all Patten men in greater rather than less degree—only made us love him the more. But other men have been so loved—men who cannot rate with Patten in accomplishment and influence.

We do not know a man until we analyze him. Even a long and intimate acquaintance, without close analysis, does not give the measure of a man. It may not be presumptuous, therefore, to consider critically that side of Dr. Patten which shows him at his best. I refer to his activity as a teacher.

In trying to get at Patten's greatest contribution, I have not been unmindful of the range and vigor of his writing. Neither have I forgot the many institutions he either fathered or fostered. But if we may regard him as a great man, the key to that greatness is to be found in his activity as a teacher. Whether he was in the classroom, in a gathering of notables, or was writing books, articles, or songs; whether he was playing bridge or furthering the work of some organization—Patten was always the teacher. His commanding position as a teacher was due to his rare ability to get people to see problems. He was essentially a discoverer of problems.

The psychologists tell us that the first step in reaching a sound judgment is to discover a problem. Then the problem must be analyzed; solutions must be suggested; these solutions must be evaluated and a decision reached. The most important task of the teacher, I feel, is to help others to develop sound judgment. But in any case it is an important task, and a notation of the steps involved in reaching such judgments is helpful in emphasizing Dr. Patten's major contribution as a teacher.

Professor Patten had an extraordinary brilliance and breadth in

uncovering problems. They might be problems in mathematics, philosophy, literature, economics, logic, music, art, what not. The range of his influence was limited only by the breadth of his interests, and the effectiveness of his teaching was traceable to the fact that he shocked even specialists in other fields into a fuller realization of their own problems.

As a teacher and thinker of original quality, Patten was, of course, misunderstood. That is one of the penalties of original thinking. But much of the misunderstanding of Patten, the teacher, particularly by people who wanted to misunderstand, was due to his uncompromising statement of problems. He was indifferent to charges of "radical tendencies." He took quiet delight in shocking people into the consciousness of problems they were more comfortable in not knowing or repressing. He knew the value of exaggeration as a means of securing emphasis. He did not trouble to correct erroneous or malicious publicity. He was anxious to get people to see problems, without rating the risk of antagonism and misunderstanding, or caring about it. He showed his greatest affection for those who were jarred enough to keep at him about the problems he raised. And in the main, the problems he discovered were fundamental.

An association with Patten was vastly more stimulating than reading his books. What he had written were problems in print, to be read any time. Meanwhile he was uncovering new problems or restating old ones, even those in his books. He was always jumps ahead of the youngsters because of his ability to see new problems and forecast others to come. He was the explorer, constantly seeking a new North Pole and never heeding the report that one had already been discovered.

This day-in and day-out search for new problems was often disconcerting. He had no sooner uncovered an apparently vital question than he had dropped it for another even more engrossing. I was often piqued by his willingness to drop today what had seemingly absorbed him yesterday. Eventually I learned that he did not forget problems. He kept passing them on to his associates—his fellow-workers. He knew that they would do the wrestling. He knew that the future was for them and they would carry on.

Patten did not have time to work out solutions for all of the problems he raised. He often slurred the process of analysis. Indeed, he had a habit of short-circuiting from problem to decision. He would not define his terms if he could help it. He berated me publicly as the "most contankerous graduate student he ever had" for persisting in the definition of his favorite terms. It was this habit that earned for him the reputation of being slippery in debate. But what he was after was the statement of a problem so as to get opposites and contrasts before

his audience. It was of no consequence to him that he was charged with disregarding or even manufacturing facts. And the solution of the problem was his least concern. He was always tolerant—if one could just see the problem.

In the solution of problems, Dr. Patten was likely to employ certain stereotypes. Among them were the concepts "economic units" and "surplus and deficit." He often told me that his whole scheme of economic theory was based on the terms surplus and deficit—which he would never define satisfactorily. Also, he clung tenaciously to a diffusion theory of distribution, which, for the thoughtful, should have been sufficient refutation of the charge of radicalism.

And so it seems to me that the truest measure of the man is found in his work as teacher. In other fields he doubtless had defects to which his followers are justified in being blind. But we are not blind to that greatest characteristic of a great teacher—his rare faculty for uncovering, for stating, for illuminating problems of social import. He knew, as we know, that one who cannot see problems, cannot think. Surveying his methods, my fondest hope for education in this land is that we may be blessed with more Pattens—more indefatigable, uncompromising delvers into things as they are that we may learn what is, and so that ultimately we may compass what ought to be.

DR. PATTEN'S CONTRIBUTION TO ECONOMICS

By Francis Tyson

Contact with Dr. Patten brought the inspiration of a rare personality and the challenge of a subtle mind. However unique his ideas—and he was startlingly original—they always compelled thought and such respect as is the due of genius. His great gifts, directed unfalteringly by an indomitable will through half a century and to the exclusion of almost all other interests, were dedicated to economic writing. It is difficult now to evaluate Dr. Patten's influence upon economic thought. That must be the work of older economists who lived through the period of the development of American economics with him.

Dr. Patten's first volume in 1885 was a discriminating reëxamination of the *Premises of Political Economy*. He called into question in the light of American experience the facts upon which the fundamental doctrines of economics—rent, the wages fund, the laws of population and diminishing returns—had been formulated by Classical Economists. Emphasis was given to neglected factors of economic change—to the increase of capital, the spread of invention and knowledge, the widening of the field of employment, and the possibilities of a general high standard of life. Stress was laid from the first upon *consumption*

and upon the changes adapting it to environmental conditions, especially upon the power of substitution for scarce foods, lowering rent. Patten saw his task as an economist to study "the effects of the consumption of wealth on its production and distribution." And this is essentially the subject matter of the later volumes which may be classed in the field of economic theory: *The Consumption of Wealth* (1889); *Dynamic Economics* (1892); *The Theory of Prosperity* (1902); and the *Reconstruction of Economic Theory* (1912). Their reiterated emphasis upon demand and their modern spirit served to extend the vogue in America of the Austrian value theory.

Dr. Patten's consistent optimism, which led him always to question the pessimism of the Classicists, was characteristically American and breathed the pioneer spirit of his own new West, embodying in intellectual terms the vigor of a young and fast developing country. Land carved from the wilderness *was* new capital, and mobile tenure kept the community competitive, preventing the growth of fixed classes and invalidating the principles of a static society. Dr. Patten's real service to economics from the first was that his remarkable qualitative insights at once stimulated discussion and impelled other writers to clarify, revise, and restate basic economic truths. His analysis of distribution is perhaps his most vital and interesting contribution, presented at length in the *Theory of Prosperity*. He regards the shares in distribution as price-determined, and makes costs subordinate and steadily reduced by progress. He applies the differential idea and the concept of alternative choice to labor and capital, as well as to land, which, however, in the absence of sweeping consumption changes, he makes the residual claimant. To adjust increasing demand with increasing returns, he makes monopoly normal and constitutes it a fund in flux, fixed and diverted continuously by struggle and by adjustment. The trenchant criticism of the revolutionary distribution programs, Socialism and Single Tax, given particularly in the chapters on the Failure of Distribution Programs in his *Reconstruction of Economic Theory*, has been too little read, even by economists.

I have wondered why, in conservative circles, Dr. Patten was often considered "a radical"—strange—and unsafe. Professor Haney in his *History of Economic Thought* claims that Patten "would allow to the government an active policy in maintaining the social interest." This seems to me a quite mistaken emphasis. Haney harks back to the early Society for the Study of National Economy, which preceded our Association, and which Professor E. J. James and Dr. Patten launched upon their return from Halle in the early eighties. Their prospectus did criticise "laws and institutions which at present favor individual instead of collective action," and proposed to stand for an increase in state functions. But this must have been a passing German

influence, for no economist more profoundly distrusted the premature extension of the power of the political government and its static rule than did Dr. Patten. His *Economic Basis of Protection* (1890) may seem a marked contradiction, but I think that Patten viewed it as an intellectual stunt—not so much with relation to its significance in bolstering up the weak theoretic case for protection, but as offering a base from which he could promulgate his dynamic theorizing as to progress, and America's opportunity to win a diverse self-sufficiency. Dr. Patten was, interestingly enough, a traditionalist in politics, and intellectually often a conservative. His emphasis was ever placed upon factors making for coöperation and productive efficiency, upon the individual's motives for advancement; in other words, always upon evolutionary change; and he set himself persistently and—in the last sad misunderstanding of his public career, in the war time—with rare personal courage and sacrifice, against the doctrines of class and race struggle, political revolution, and war. For half a century he indicted waste and maladjustment and insisted always upon compromise, good will, and enhancement of production by new invention and improved technique of organization.

Dr. Patten's favorite field of speculation was the economic interpretation of history. His *magnum opus*, the *Development of English Thought* (1898), was long the basis of his famous general lecture course at the University of Pennsylvania which drew so many of his students to him. He sought to divide history into epochs, each beginning with a significant economic change that compelled social reconstruction. The theory claims that economic motives and needs constitute the dynamic factors in national life; that the past should be studied in the light of the present; and it makes economic and industrial societies normal. Or, viewed another way, acquired characters, as contrasted with fixed, natural human traits, are economic. The problem of economic philosophy then becomes psychological—the formulation of the tendencies and laws of the readjustment of tradition and morals under pressure of new economic stimuli, a study of human motives and their adaptation, to permit a fuller release of hereditary capacity. Dr. Patten saw the human problem steadily as an economic-psychological complex. Practically the whole of his later writing—*Heredity and Social Progress, The Theory of Social Forces, The New Basis of Civilization, The Social Basis of Religion*, and a profusion of magazine articles—deals with social psychology.

Regret has sometimes been expressed by economists that a brilliant thinker who had contributed so significantly to economic theory should have left that field; but Dr. Patten never considered that he had wandered from the legitimate field of political economy. He asserted that he was always the economist, that his later work followed of

necessity from his broad concept of the field and scope of economics and his supreme emphasis upon consumption as the basis of social change. He was simply seeking a foundation in psychology to explain the transformation of traditional traits under the pressure of economic forces.

The psychologist, or philosopher using social psychology, could make an interesting comparative study of Patten's successive employment of various psychological and philosophical ideas in his books, from utilitarianism, through hedonism and idealism to the modern concepts of behaviourism, and psycho-analysis. And there would be a considerable residuum of Patten's own ideas, the product of his creative, tortuous mind—a new physiology and biology, scarcely comprehensible. Yet he kept ever moving on, priding himself that his thought never remained this year where it had been last year. And for all the appearance of inconsistency and lack of system of a philosopher building upon his dead selves, the golden thread binding his diverse and sometimes diffuse thought was his continued emphasis upon the preeminence of economic facts and tendencies, and upon their functional relation to human progress.

"In practice every one fails," he writes, "who tries to study social and moral problems before the effects of economic pressure on natural traits have been ascertained"; and he points to the failure of Compte and the sociologists "to erect historical proofs into valid generalizations of universal propositions." In the *Reconstruction of Economic Theory* he again distinguishes between the methods of the economist and the sociologist, decidedly to the advantage of the former.

Even in Dr. Patten's endeavors in literature—his unpublished drama, the *Advent Hymns*, and the novel *Mud Hollow*, published just before his death—he was motivated, unfortunately for the artistic value of those works, by his economic insistence. *Mud Hollow*, of which happily but half is novel, summarizes in stimulating fashion Dr. Patten's mature thought. He studies the surviving American type, the "homed" people of the western towns and farms, the comfortable class numerous enough to form public opinion and "make the stone on which evolution rests."

Simon Patten, economist, speaks as clearly at seventy, at the end of his long career, as at the beginning; "An economic society is ahead. This means that productive power—not culture—will have the first place, and that efficiency will reign without dispute. We shall then have an economic democracy which must be sharply contrasted with political democracy. Instead of numerical decision, dominance will be the result of a mass judgment in which classes participate not according to their number but according to their economic power..... The grind of conformity must precede the rise of democracy." He

sees democracy, not as a dead level of equality, but as a hierarchy of talent and income power, with leadership based upon intellect and inspiration, and rising out of American prosperity. Woman, as always with Dr. Patten, who was a consistent and thorough-going feminist, is to win a high place, through the mental freedom which economic independence makes possible.

But Dr. Patten finds from the war experience that "human nature is vaguer, more emotional, with fewer of the rock attributes, than was thought." His only hope is that in our Asian heredity there are forces which under the stimulus of the American situation will break the trammels of our European culture. "Progress demands discontent as well as surplus, new wants to battle with old restraints, a shift in emotion in addition to changes in corn plows and harvesters." Surplus must turn itself into adventure, upset tradition, and create variation.

Dr. Patten liked to think of himself as a pragmatist in thought and action. He makes values ultimate and measures truth by its effects. The economic interpretation of history, which is concerned with consequences, not causes, seemed to him a unique instance of the worth of pragmatic method. His tests of conduct and progress are social and economic. To use one of the many vital classifications that fill his books, the economic tests are: prosperity, coöperation, and peace; the physical: efficiency, vigor, and longevity; the emotional: service, public spirit, and missionary zeal. "Truth," Patten writes, "is not only workable, it makes men work"; and he followed his precept if ever man did, working endlessly, not only at his writing, but in service for his students and friends, and for the causes and institutions, like the Wharton School and the Graduate School at Pennsylvania, with which he was connected.

"Professor William James," he declares, "is a philosopher moving towards economics. I am an economist on the road to philosophy." The economic and social pragmatism of Patten, capable of objective quantitative proof, is much more significant than the radical personal empiricism of James. If Patten had but possessed the splendid literary gift of James, his influence upon American thinking might well have been revolutionary. It is regrettable from the scientific point of view that Dr. Patten was seldom able to develop his remarkable creative insights in quantitative terms, though he encouraged and stimulated statistical research, and his deep hunger for truth lives potently in many of his students.

Dr. Patten's last published words may serve as his challenge and his farewell. He writes at the end of *Mud Hollow*:

> Evolution is not a dream, but a series of transformations, a shifting from one base to another. Each civilization is such a shift. Each master mind

is he who points the way from one base to another. The real makers of evolution are not the dreamers, but those who create a new order to replace the chaos into which their fellows have fallen. The growth of new physical traits, the pressure of invention, and the fruit of adventure make old institutions untenable. Their replacement makes a step in evolution. Such steps are associated with Moses, Luther, Cromwell, Lincoln, and Bismarck. Each leads his comrades through a wilderness, into a land of promise. These men make history.....However we judge their mistakes and failures, they each helped to establish a new order, which, moving mankind upward, brought a new equilibrium.

We have broken with our past and pushed on into a depression out of which there is no beaten path. To find an exit is evolution's next great task. People and situations have importance only as measuring change and pointing to this new equilibrium. We are in a period of progress..... When the clouds break we shall be in a new Paradise but not in Eden. Many, many paradises must be sought and gained before Eden reopens her gates.

The coming American generation may yet seek in Dr. Patten one of its prophets and leaders to a promised land. Time sifts all values, and the future may recognize the most stimulating and optimistic thinker of his day. But we have not understood or acclaimed him; and it remains to be seen whether his vital thought can break the bonds of a literary style often barren, halting, and confused, and whether his intellectual genius can triumph over the limitations of words. Yet, whatever the future holds, Dr. Patten, in his fine modesty, would gladly give the lead to others. But he would claim for economics the high task of human guidance and prophecy.

PUBLICATIONS OF THE AMERICAN ECONOMIC ASSOCIATION

1923

FIRST SERIES

Any volume of the First Series in paper, $4.00. A special price will be made for the Series.

**Numbers starred are sold only with the set; the supply of those doubled starred is exhausted. For information apply to the Secretary.*

Volume I, 1886

		Price in paper
1.	Report of Organization of the American Economic Association. Pp. 46.	$ .50
2-3.	**Relation of the Modern Municipality to the Gas Supply. By E. J. James. Pp. 66.	.75
4.	Coöperation in a Western City. By Albert Shaw. Pp. 106.	.75
5.	Coöperation in New England. By E. W. Bemis. Pp. 136.	.75
6.	**Relation of the State to Industrial Action. By H. C. Adams. Pp. 85.	.75

Volume II, 1887

1.	Three Phases of Coöperation in the West. By Amos G. Warner. Pp. 119.	.75
2.	Historical Sketch of the Finances of Pennsylvania. By T. K. Worthington. Pp. 106.	.75
3.	The Railway Question. By Edmund J. James. Pp. 68.	.75
4.	Early History of the English Woolen Industry. By W. J. Ashley. Pp. 85.	.75
5.	Mediaeval Guilds of England. By E. R. A. Seligman. Pp. 113.	.75
6.	Relation of Modern Municipalities to Quasi-Public Works. By H. C. Adams and others. Pp. 87.	.75

Volume III, 1888

1.	Statistics in College, by C. D. Wright; Sociology and Political Economy, F. H. Giddings; The Legal-Tender Decisions, by E. J. James. Pp. 80.	.75
2.	Capital and Its Earnings. By John B. Clark. Pp. 69.	.75
3.	The Manual Laboring Class, by F. A. Walker, Mine Labor in the Hocking Valley, by E. W. Bemis; Report of the Second Annual Meeting. Pp. 86.	.75
4-5.	**Statistics and Economics. By Richmond Mayo-Smith. Pp. 127.	1.00
6.	The Stability of Prices. By Simon N. Patten. Pp .64.	.75

Volume IV, 1889

1.	Contributions to the Wages Question: The Theory of Wages, by Stuart Wood; Possibility of a Scientific Law of Wages, by J. B. Clark. Pp. 69.	.75
2.	Socialism in England. By Sidney Webb. Pp. 73.	.75
3.	Road Legislation for the American State. By J. W. Jenks. Pp. 83.	.75
4.	Third Annual Meeting: Report of the Proceedings. Pp. 123.	.75
5.	Malthus and Ricardo, by S. N. Patten; The Study of Statistics, by D. R. Dewey; Analysis in Political Economy, by W. W. Folwell. Pp. 69.	.75
6.	An Honest Dollar. By E. Benjamin Andrews. Pp. 50.	.50

Volume V, 1890

1.	The Industrial Transition in Japan. By Yeijiro Ono. Pp. 122.	1.00
2.	Two Essays on Child-Labor. By W. F. Willoughby and Clare de Graffenried. Pp. 150.	.75
3-4.	Papers on the Canal Question. By E. J. James and L. M. Haupt. Pp. 85.	1.00
5.	History of the New York Property Tax. By J. C. Schwab. Pp. 108.	1.00
6.	The Educational Value of Political Economy. By S. N. Patten. Pp. 36.	.75

Volume VI, 1891

1-2.	Fourth Annual Meeting: Reports, Papers, Discussions.	1.00
3.	Government Forestry. Papers by Pinchot, Bowers, and Fernow. Pp. 102.	.75
4-5.	Municipal Ownership of Gas in the U. S. By E. W. Bemis. Pp. 185.	1.00
6.	State Railroad Commissions. By F. C. Clark. Pp. 110.	.75

Volume VII, 1892

1.	*The Silver Situation in the United States. By F. W. Taussig. Pp. 118.	.75
2-3.	**Shifting and Incidence of Taxation. By E. R. A. Seligman. Pp. 424 (Revised).	2.00
4-5.	Sinking Funds. By Edward A. Ross. Pp. 106.	1.00
6.	The Reciprocity Treaty with Canada of 1854. By F. E. Haynes. Pp. 70.	.75

Volume VIII, 1893

1. Fifth Annual Meeting: Report of the Proceedings. Pp. 130. .75
2-3. Housing of the Poor in American Cities. By M. T. Reynolds. Pp. 132. 1.00
4-5. Public Assistance of the Poor in France. By E. G. Balch. Pp. 180. 1.00
6. First Stages of the Tariff Policy of the U. S. By William Hill. Pp. 162. 1.00

Volume IX, 1894

Sixth Annual Meeting: Hand-Book and Report. Pp. 73. .50
1-2. Progressive Taxation in Theory and Practice. By Edwin R. A. Seligman. Pp. 222. (*See 1908, No. 4.*) 1.00
3. The Theory of Transportation. By C. H. Cooley. Pp. 148. .75
4. Sir William Petty. By Wilson Lloyd Bevan. Pp. 102. .75
5-6. Papers on Labor Problems. By J. B. Clark, C. D. Wright, D. R. Dewey, A. T. Hadley, and J. G. Brooks. Pp. 94. .75

Volume X, 1895

Seventh Annual Meeting: Hand-Book and Report. Pp. 138. .50
1-3. The Canadian Banking System, 1817-1890. By R. M. Breckenridge. Pp. 478. 1.50
4. Poor Laws of Massachusetts and New York. By John Cummings. Pp. 136. .75
5-6. Letters of Ricardo to McCulloch, 1816-1823. Edited by J. H. Hollander. Pp. 204. (*In Cloth, $1.75*) 1.25

Volume XI, 1896

1-3. Race Traits and Tendencies of the American Negro. By F. L. Hoffman. Pp. 330. 1.25
4. Appreciation and Interest. By Irving Fisher. Pp. 110. .75
*General Index to Volumes I-XI (1886-1896). .25

ECONOMIC STUDIES

Price of the Economic Studies $2.50 per volume in paper.

Volume I, 1896

Eighth Annual Meeting: Hand-Book and Report. Pp. 178. .50
1. The Theory of Economic Progress, by J. B. Clark; The Relation of Changes in the Volume of the Currency to Prosperity. By F. A. Walker. Pp. 46. .50
2. The Adjustment of Wages to Efficiency. Three Papers: Gain Sharing, by H. R. Towne; The Premium Plan, by F. A. Halsey; A Piece-Rate System, by F. W. Taylor. Pp. 83. .50
3. The Populist Movement. By Frank L. McVey. Pp. 81. .50
4. The Present Monetary Situation. By W. Lexis. Translated by John Cummings. Pp. 72. .50
5-6. The Street Railway Problem in Cleveland. By W. R. Hopkins. Pp. 94. .75

Volume II, 1897

Ninth Annual Meeting: Hand-Book and Report. Pp. 162. .50
1. Economics and Jurisprudence. By Henry C. Adams. Pp. 48. .50
2. The Saloon Question in Chicago. By John E. George. Pp. 62. .50
3. The General Property Tax in California. By C. C. Plehn. Pp. 88. .50
4. Area and Population of the United States at the Eleventh Census. By W. F. Willcox. Pp. 60. .50
5. A Discussion Concerning the Currencies of the British Plantations in America, etc. By William Douglass. Edited by C. J. Bullock. Pp. 228. .50
6. Density and Distribution of Population in the United States at the Eleventh Census. By W. F. Willcox. Pp. 79. .50

Volume III, 1898

Tenth Annual Meeting: Hand-Book and Report. Pp. 136. .50
1. Government by Injunction. By William H. Dunbar. Pp. 44. .50
2. Economic Aspects of Railroad Receiverships. By H. H. Swain. Pp. 118. .50
3. The Ohio Tax Inquisitor Law. By T. N. Carver. Pp. 50. .50
4. The American Federation of Labor. By Morton A. Aldrich. Pp. 54. .50
5. Housing of the Working People in Yonkers. By E. L. Bogart. Pp. 82. .50
6. The State Purchase of Railways in Switzerland. By Horace Michelie; translated by John Cummings. Pp. 72. .50

Volume IV, 1899

Eleventh Annual Meeting: Hand-Book and Report. Pp. 126. .50
1. I. Economics and Politics. By A. T. Hadley. II. Report on Currency Reform. III. Report on the Twelfth Census. Pp. 70. .50
2. Personal Competition. By Charles H. Cooley. Pp. 104. .50
3. Economics as a School Study. By F. R. Clow. Pp. 72. .50
4-5. The English Income Tax. By J. A. Hill. Pp. 162. 1.00
6. (and last). Effects of Recent Changes in Montary Standards upon the Distribution of Wealth. By F. S. Kinder. Pp. 91. .50

NEW SERIES

1. The Cotton Industry. By M. B. Hammond. Pp. 382. (*In cloth $2.00*) 1.50
2. Scope and Method of the Twelfth Census. Critical discussion by over twenty statistical experts. Pp. 625. (*In cloth $2.50*) 2.00

THIRD SERIES

NOTE.—*During 1896-1899 the Association issued its publication in two series, viz.: the bimonthly Economic Studies, and the "New Series" of larger monographs printed at irregular intervals. In 1900 it reverted to the policy of issuing its monographs, now called the "Third Series" of the publications at quarterly intervals.*

Price per volume $4.00. A special rate will be made to libraries on application.

Volume I, 1900

1. Twelfth Annual Meeting: Papers on Economic Theory and Political Morality; Trusts; Railroad Problems; Public Finance; Consumers' League; Twelfth Census. Pp. 186. 1.00
2. The End of Villainage in England. By T. W. Page. Pp. 99. 1.00
3. Essays in Colonial Finance. By members of the Association. Pp. 303. 1.50
4. Currency and Banking in the Province of Massachusetts Bay. By A. McF. Davis. Part I: Currency. Pp. 464 + 19 photogravure plates. (*In cloth $2.00.*) 1.75

Volume II, 1901

1. *Thirteenth Annual Meeting: Papers on Competition; Commercial Education; Economic Theory; Taxation of Quasi-public Corporations; Municipal Accounts. Pp. 300. 1.25
2. Currency and Banking. By A. McF. Davis. Part II: Banking. Pp. 341 + 18 photogravure plates. (*In cloth $2.00*) 1.75
3. Theory of Value before Adam Smith. By Hannah R. Sewall. Pp. 132. 1.00
4. Administration of City Finances in the U. S. By F. R. Clow. Pp. 144. 1.00

Volume III, 1902

1. Fourteenth Annual Meeting: Papers on International Trade; Industrial Policy; Public Finance; Protective Tariff; Negro Problem; Arbitration of Labor Disputes in Coal Mining Industry; Porto Rican Finance; Economic History. Pp. 400. 1.50
2. **The Negro in Africa and America. By Joseph A. Tillinghast. Pp. 240. 1.25
3. Taxation in New Hampshire. By M. H. Robinson. Pp. 232. 1.25
4. Rent in Modern Economic Theory. By Alvin S. Johnson. Pp. 136. .75

Volume IV, 1903

1. Fifteenth Annual Meeting: Papers and Discussions on Economics and Social Progress. Trade Unions and the Open Shop; Railway Regulation; Theory of Wages; Theory of Rent; Oriental Currency Problem. Pp. 298. 1.25
2. Ethnic Factors in the Population of Boston. By F. A. Bushee. Pp. 171. 1.00
3. History of Contract Labor in the Hawaiian Islands. By Katherine Coman. Pp. 74. .75
4. *The Income Tax in the Commonwealth of the United States. By Delos O. Kinsman. Pp. 134. 1.00

Volume V, 1904

Sixteenth Annual Meeting. Papers and Proceedings published in two parts.

1. Part I—Papers and Discussions on Southern Agricultural and Industrial Problems; Social Aspects of Economic Law; Relations Between Rent and Interest. Pp. 240. 1.00

Southern Economic Problems. Reprinted from part I. .50

Relations Between Rent and Interest. By Frank A. Fetter and others. Reprinted from part I. .50

2. Part II—Papers and Discussions on The Management of the Surplus Reserve; Theory of Loan Credit in Relation to Corporation Economics; State Taxation of Interstate Commerce; Trusts; Theory of Social Causation. 1.00

Theory of Social Causation. By Frank H. Giddings and others. Reprinted from part II. .50

3. Monopolistic Combinations in the German Coal Industry. By Francis Walker. Pp. 340. 1.25

4. The Influence of Farm Machinery on Production and Labor. By Hadley Winfield Quaintance. Pp. 110. .75

Volume VI, 1905

Seventeenth Annual Meeting. Papers and Proceedings published in two parts.

1. Part I—Papers and Discussions on the Doctrine of Free Trade; Theory of Prices; Theory of Money; Open Shop or Closed Shop. Pp. 226. 1.00

2. Part II.—Papers and Discussions on Government Interference with Industrial Combinations; Regulation of Railway Rates; Taxation of Railways; Preferential Tariffs and Reciprocity; Inclosure Movement; Economic History of the United States. Pp. 270. 1.00

3. **The History and Theory of Shipping Sudsidies. By R. Meeker. Pp. 230. 1.00

4. Factory Legislation in the State of New York. By F. R. Fairchild. Pp. 218. 1.00

Volume VII, 1906

1. Eighteenth Annual Meeting: Papers and Discussions on The Love of Wealth and the Public Service; Theory of Distribution; Government Regulation of Railway Rates; Municipal Ownership; Labor Disputes; The Economic Future of the Negro. Pp. 325. 1.00

2. Railroad Rate Control. By H. S. Smalley. Pp. 147. 1.00

3. On Collective Phenomena and the Scientific Value of Statistical Data. By E. G. F. Gryzanovski. Pp. 48. .75

Hand-Book of the Association, 1906. Pp. 48. .25

4. The Taxation of the Gross Receipts of Railways in Wisconsin. By G. E. Snider. Pp. 138. 1.00

Volume VIII, 1907

1. Nineteenth Annual Meeting: Papers and Discussions on Modern Standards of Business Honor; Wages as Determined by Arbitration; Commercial Education; Money and Banking; Western Civilization and Birth Rate; Economic History; Government Regulation of Insurance; Trusts and Tariff; Child Labor. Pp. 268. 1.00

2. Historical Sketch of the Finances and Fnancial Policy of Massachusetts from 1780 to 1905. By C. J. Bullock. Pp. 144. 1.00

Hand-Book of the Association, 1907. Pp. 50. .25

3. The Labor Legislation of Connecticut. By Alba M. Edwards. Pp. 322. 1.00

4. The Growth of Large Fortunes. By G. P. Watkins. Pp. 170. 1.00

Volume IX, 1908

Hand-Book of the Association, 1908. Pp. 49. .25

1. Twentieth Annual Meeting: Papers and Discussions on Principles of Government Control of Business; Are Savings Income; Agricultural Economics; Money and Banking; Agreements in Political Economy; Labor Legislation; Relation of the Federal Treasury to the Money Market; Public Service Commissions. Pp. 311. 1.25

2. Chicago Traction. By R. E. Heilman. Pp. 131. 1.00

3. Factory Legislation of Rhode Island. By J. K. Towles. Pp. 119. 1.00

4. Progressive Taxation in Theory and Practice. Revised Edition. By E. R. A. Seligman. Pp. 334. (*In cloth $1.75.*) 1.25

Volume X, 1909

1. Twenty-first Annual Meeting: Papers and Discussions on The Making of Economic Literature; Collective Bargaining; Round Table on Accounting; Labor Legislation; Employers' Liability; Canadian Industrial-Disputes Act; Modern Industry and Family Life; Agricultural Economics; Transportation; Revision of the Tariff; A Central Bank; The National Monetary Commission; Capitalization of Public Service Corporations in Massachusetts. Pp. 432. 1.50
2. Hand-Book of the Association, 1909. Pp. 59. .25
3. The Printers. By George E. Barnett. Pp. 379. (*In cloth $2.00.*) 1.50
4. Life Insurance Reform in New York. By W. H. Price. Pp. 95. .75

Volume XI, 1910

1. Twenty-second Annual Meeting: Papers and Discussions on History of the Association; Observation in Economics; Economic Dynamics; Theory of Wages; Country Life; Valuation of Public Service Corporations; Trusts; Taxation. Pp. 386. 1.50
2. Hand-Book of the Association, 1910. Pp. 79. .25
3. The Child Labor Policy of New Jersey. By A. S. Field. Pp. 229. 1.25
4. The American Silk Industry and The Tariff. By F. R. Mason. Pp. 178. 1.00

THE ECONOMIC BULLETIN

Published quarterly in 1908, 1909, and 1910, and containing personal notes, news of the economic world, announcements of special lines of investigation, and a classified and annotated bibliography of the current books and articles on economic subjects.

Volume I, 1908. Four numbers. $2.00; each .60
Volume II, 1909. Four numbers. $2.00; each .60
Volume III, 1910. Four numbers. $2.00; each .60

FOURTH SERIES

Subscriptions by non-members, libraries, etc., $5.00 a year.

Volume I, 1911

The American Economic Review, ** March, June, September, and December; each, 1.00

Twenty-third Annual Meeting: Papers and Discussions on The Significance of a Comprehensive System of Education; Money and Prices; The Ricardo Centenary; Accounting; Canals and Railways; Population and Immigration; Labor Legislation; Taxation; A Definition of Socialism; Competition in the Fur trade. Pp. 388. 1.50

Handbook of the Association, 1911, Pp. 69. (Out of Print)

Volume II, 1912

The American Economic Review, March, June, September, and December; each, 1.00

Supplement.—Twenty-fourth Annual Meeting:
Papers and Proceedings. The Economic Utilization of History; Tariff Legislation; The Federal Budget; Rural Conditions; Selection of Population by Migration; The Price Concept; An International Commission on the Cost of Living; Industrial Efficiency. 1.25

Volume III, 1913

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Twenty-fifth Annual Meeting:
Papers and Proceedings. Population or Prosperity; The Rising Cost of Living—Standardizing the Dollar; Banking Reform; Theories of Distribution; Farm Management; Governmental Price Regulation. Pp. 155. 1.25
Supplement—Handbook of the Association, 1913. Pp. 61. .50

Volume IV, 1914

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Twenty-sixth Annual Meeting:
Papers and Proceedings. The Increasing Governmental Control of Economic Life; The Control of Public Utilities; Railroad Rate Making; Syndicalism; Trust Decisions and Business. Pp. 211. 1.25
Supplement.—Handbook of the Association, 1914. .75

Volume V, 1915

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Twenty-seventh Annual Meeting:
Papers and Proceedings. Economics and the Law; Regulation of the Stock Exchanges; Market Distribution; Statistical Work of the United States Government; Relation of Education to Industrial Efficiency; The Effect of Income and Inheritance Taxes on the Distribution of Wealth; Public Regulation of Wages. 1.25

Volume VI, 1916

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Twenty-eighth Annual Meeting:
Papers and Proceedings. The Apportionment of Representatives; Effect of the War on Foreign Trade; Budget Making and the Increased Cost of Government; Economic Costs of War; Economic Theorising and Scientific Progress; The Role of Money in Economic Theory; Price Maintenance; Investment of Foreign Capital. Pp. 248. 1.25
Supplement.—Handbook of the Association, 1916. .75

Volume VII, 1917

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Twenty-ninth Annual Meeting:
Papers and Proceedings. The National Point of View in Economics; Landed Property; Two Dimensions of Economic Productivity; Some Social Surveys in Iowa; The Land Problem and Rural Welfare; The Federal Farm Loan Act; Statistics of the Concentration of Wealth; Gold Supply at the Close of the War; Loans and Taxes in War Finance; Problems of Population after the War; Some Phases of the Minimum Wage. Pp. 275. 1.25
Supplement.—Index to the Publications, 1886-1910. .25

Volume VIII, 1918

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Thirtieth Annual Meeting:
Papers and Proceedings. Economic Reconstruction; Federal Taxes upon Income and Excess Profits; Land Utilization and Colonization; Federal Valuation of Railroads; Coördination of Employment Bureaus; Control of the Acquisition of Wealth; Motives in Economic Life; Price-Fixing; Problems of Governmental Efficiency; Economic Alliances and Tariff Adjustments. Pp. 317. 1.25

Volume IX, 1919

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Thirty-first Annual Meeting:
Papers and Proceedings. Economists in Public Service; Interest on Investment a Manufacturing Cost Factor; Control of Marketing Methods and Costs; War and the Supply of Capital; War and the Rate of Interest; Index of the Cost of Living; Securing The Initiative of the Workman; A Legal Dismissal Wage; After-War Gold Policies; Foreign Exchange; Stabilizing the Dollar; Tenancy of Landed Property; Price Fixing; Economic Theory in an Era of Readjustment; Psychology and Economics; The Open Door and Colonial Policy; Reports of Committees on Foreign Trade and Purchasing Power of Money. Pp. 368. 1.25

Supplement No. 2.—Report of the Committee on War Finance. Pp. 143. .50

Supplement No. 3.—Handbook of the Association, 1919. .75

Volume X, 1920

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Thirty-second Annual Meeting:
Papers and Proceedings. Excess Profits Taxation; Germany's Reparation Payments; International Supervision over Foreign Investments; Results of a Balanced Industrial System; Employees' Representation in Management of Industry; Prices and Reconstruction; Banking Policy and Prices; Large-Scale Marketing; Reports of Committees on Foreign Trade, Coördination in Taxation, Census Advisory Committee. Pp. 278. 1.25

Supplement No. 2.—Taxation of Excess Profits in Great Britain. Pp. 244. 2.50

Volume XI, 1921

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Thirty-third Annual Meeting:
Papers and Proceedings. The Railroad Situation; Our Foreign Trade Balance; Problems of the Bituminous Coal Industry; Traditional Economic Theory; Non-Euclidean Economics; Federal Taxation of Profits and Income; Teaching of Elementary Economics. Pp. 194. 1.25

Supplement No. 2.—Karelsen Prize Essays, on What Can a Man Afford. Pp. 118. 1.00

Volume XII, 1922

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Thirty-fourth Annual Meeting:
Papers and Proceedings. Business Cycles; American Trade Unionism; The Railroads; Workmen's Compensation; Federation in Central America; Teaching of Elementary Economics; The Chain Store Grocer; Economics and Ethics. Pp. 194. 1.25

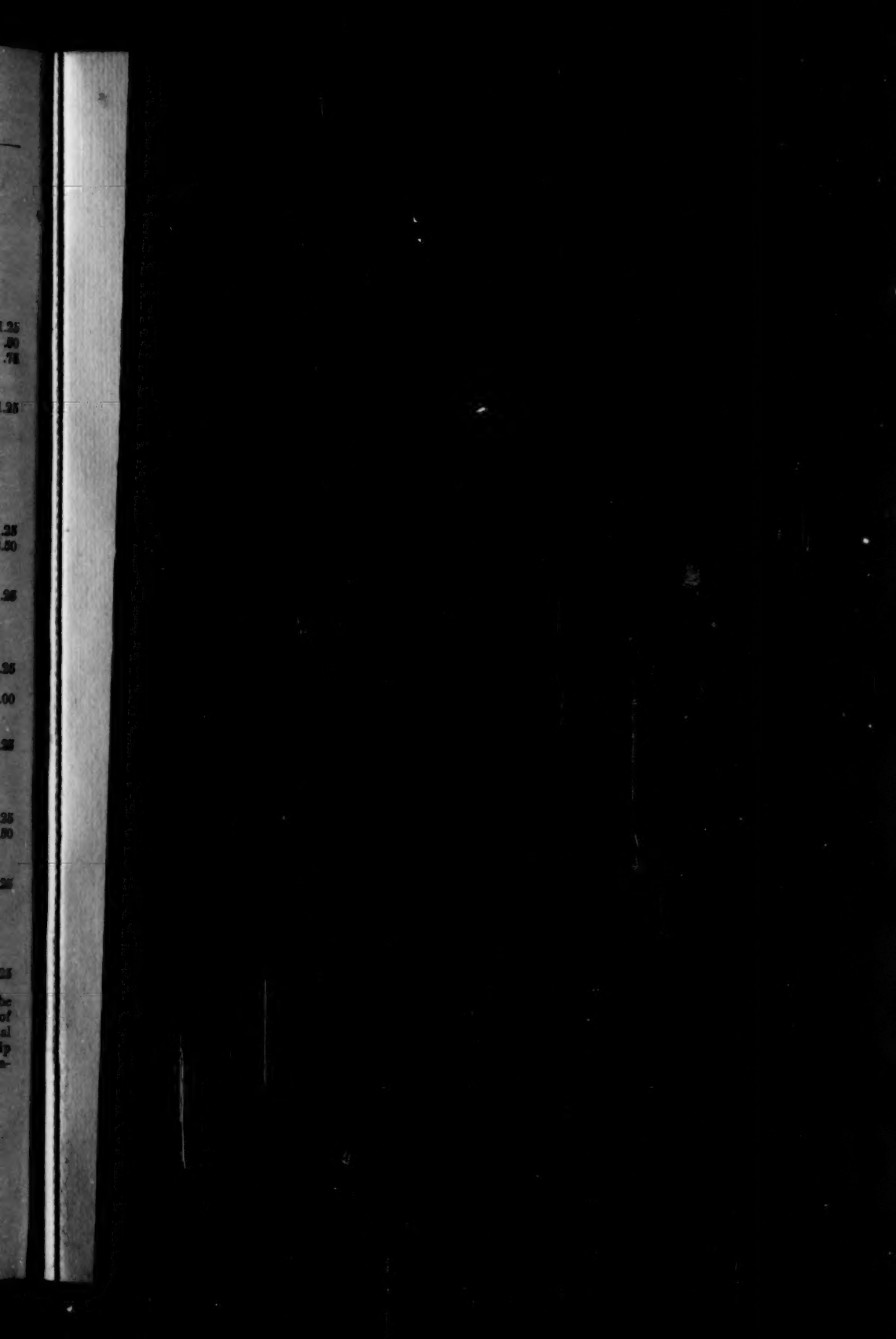
Supplement No. 2.—Handbook of the Association, 1922. 1.50

Volume XIII, 1923

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Thirty-fifth Annual Meeting:
Papers and Proceedings. Trend of Prices; Trend of Rate of Interest and Investment; Outlook for Wages and Employment; Overhead Costs; Commercial Rent and Profits; Labor Turnover; Factors in Wage Determinations; Income of Farmers; Large-Scale Production and Merchandising; Marketing Farm Products; Bureaus of Business Research. 1.25

The American Economic Association, founded, among other purposes, for "the encouragement of economic research," and "the encouragment of perfect freedom of economic discussion," has about 3000 members, including public and professional men and most of the leading students of political economy in America. Membership dues are five dollars a year. Each member receives all current reports and publications of the Association.

Address all orders for publications, applications for membership, and inquiries to the

SECRETARY OF THE AMERICAN ECONOMIC ASSOCIATION
Yale Station, New Haven, Conn.